HITACHI

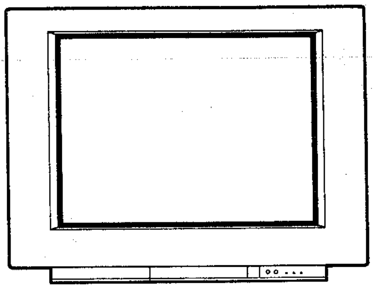
SERVICE MANUAL

PAL/SECAM/NTSC

YK No.0438CE

CMT2988 -981 -051 -081

A1PL3Chassis



號　碼	NICAM	TELETEXT
—981	適 配 器	適 配 器
—051	○（ I ）	適 配 器
—081	○ (B/G)	○

CODE	NICAM	TELETEXT
—981	adapter	adapter
—051	○ (I)	adapter
—081	○ (B/G)	○

注　　意： 開始檢修電視機機芯以前，檢修人員必須閱讀這本檢修手册中　“有關安全上的預防事項”及“製品安全上的注意”兩節。

CAUTION: Before servicing this chassis, it is important that the service technician read the "Safety Precaution" and "Product Safety Notices" in this service Manual.

目　次

有關安全上的預防事項……………………… 2
有關製品安全上的注意事項………………… 2
有關技術上的注意事項……………………… 3
規格表………………………………………… 3
主要優點……………………………………… 3
各種調整機件的名稱………………………… 4
遙控發射機…………………………………… 4
布線圖………………………………………… 8
基本線路圖…………………………………… 11
印刷線路圖…………………………………… 20
替換零件表…………………………………… 25

CONTENTS

Safety precautions 5
Product safety notice 5
Technical cautions 6
Technical specifications 6
Main features 6
Names of controls 7
Remote control unit 7
Wiring diagram 8
Basic circuit diagram 11
Printed wiring board 20
Replacement parts list 25

因機器不斷改良，所以各種規格和零件也會有變動。

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

彩色電視機
COLOUR TELEVISION

September 1992　Consumer Electronics Division

有關安全上的預防事項

警告：因爲在動作期間這電視機的底盤與電源的一端互相連接，所以對檢修這類型號的機器所必須的預防措施不熟悉的人不應該企圖檢修機器。要檢修必須遵守下列預防事項。

1. 要裝入、取出或處理顯像管時必須帶上防碎玻璃作的護目鏡。處理顯像管時不帶這護目鏡的人不可接近。顯像管應放在離開人體的地方。
2. 將底盤裝入機箱裏面時，所有的保護裝置如隔板、非金屬的調整鈕、小室蓋子或小室屏蔽、隔離用電阻•電容器等也應該裝回去。
3. 開始檢修之前應該注意原來的引線包層。尤其是在電壓電路部分需要特別小心，必須認清正確的引線包層。
4. 要檢修請一定使用製造廠所指定的替換用機件。尤其在電路上有注明幾個特別重要的機件，要替換這些機件絕不可使用其他廠家的製品。
   當電路發生短路時，凡是有過熱痕跡的機件需要全部交換。
5. 將修好的電視機送回顧客以前，檢修人員應該徹底試驗機器以保證它完全安全，絕沒有電擊的危險，並確實檢查機器內部的各種保護裝置，以保證這些部分沒有因檢修而失靈。
   由於上面理由，檢修人員最好實行以下各項檢查，以保證顧客和自己能繼續得到安全。

絕緣

電源電極與任何可觸及的金屬部分之間的絕緣電阻不可小於7兆歐姆(加上直流500伏電壓時)。加之，在電源電極與任何可觸及的金屬部分之間加上4千伏的交流電壓(1分鐘)而試驗其絕緣強度時，不可以發生閃絡或絕緣擊穿等現象。

X射線

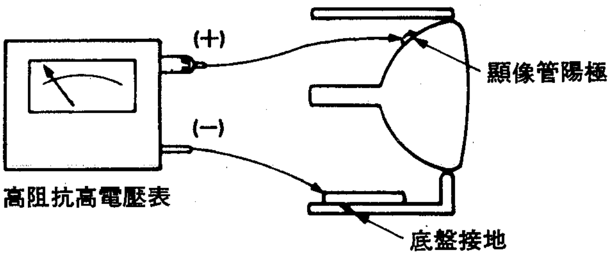
顯像管：這部電視機所產生的X射線，其主要的來源是顯像管。所以這部電視機所使用的顯像管有特別的構造設計，使X射線盡量少。爲了能繼續防止X射線起見，要交換顯像管時請一定使用相同型號的日立顯像管。

檢修人員應注意事項

當黑色電平話圖像調整在最小位置時，這電視機的高壓低於31.5千伏。如替換了任何會影響到高壓的部件的話，請一定確認亮廣和對比廣最小時的高壓低於31.5千伏。

要測量高壓請使用高阻抗高電壓表。請將電表的(−)端子連接於底盤接地端子，(＋)端連接於顯像管的陽極鈕上。（請參看下面接線圖。）

註：將電表連接於陽極鈕上以前，請一定斷開電源開關。



有關製品安全上的注意事項

日立電視機所使用的許多機件具有有關安全的特別性能。這種特別性能在表面上往往看不出來，而且即使使用額定電壓或功率更大的其他替換用機件也不一定可得到這些日立機件所保證的保護性能。在這本檢修手册裏面有指定這些具有特別安全特性的替換用機件。在這本檢修手册的簡圖和替換用機件表上附帶⚠記號的機件就表示具備這種特別的安全特性。

如果不使用這本檢修手册機件表上HITACHI所推薦的替換用機件而使用沒有同樣安全特性的其他替換用機件的話，就會發生電擊、失火、X射線等事故。

HITACHI對製品安全不斷努力改進，經常發出新的技術指令。如需要新的技術情報就請參看最新的HITACHI檢修手册。可向HITACHI銷售公司預訂或增訂"日立檢修手册"，只收取極少費用。

有關技術上的注意事項

高壓限制器電路的檢查

1．將高壓電壓表連接於顯像管陽極（陽極罩）和接地（顯像管接地引線）之間。

2．接地廣播信號，並將亮廣調整和對比度調整設定爲最大。將電子束電流設定爲
1.45壹安培±10%
（截止調整後）

3．將交流輸入電壓設定爲　132±3伏。

4．請檢查這時的一定高壓是28.7±1.0千伏。

5．斷開機器的電源開關，並狀第3圖所示夾具連接於 R971的兩端，如第1圖所示。

6．將亮度調整和對比度調整保持於第2項中所設定的位置，並使交流輸入電壓固定於 132伏。打開機器電源，增加交流輸入，並確認高電壓在35.0千伏以下時圖像消失。

7．這檢查完了後將機器電源開關立刻斷開。

8．將調整用夾具和高壓電壓表取下。

註：在陽極上連接高壓電壓表時或將它卸下時，請一定將機器電源開關（等剩餘的高電壓放電到底盤後將電源開關，因爲高電壓會殘留於陽極單。）

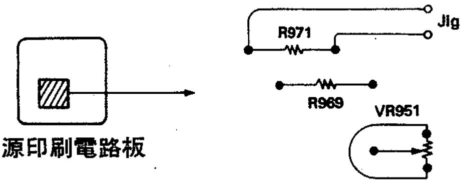


圖 1

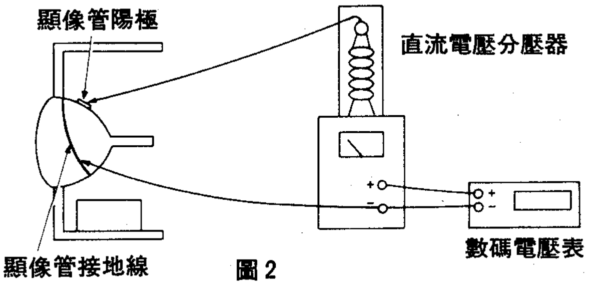


圖 2

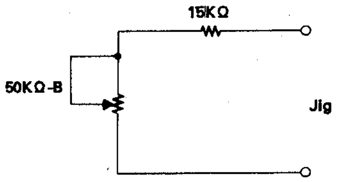


圖 3

規格表

<table>
<tr><td rowspan="5">接收方式</td><td rowspan="5">625-條線　B.G/I/D.K/H PAL,
B.G/D.K/K' SECAM
NTSC50
525-條線　M/NTSC
NTSC3.58-5.5/6.0/6.5
NTSC4.43-5.5/6.0/6.5
PAL60</td><td>天線輸入</td><td>75歐姆（不平衡型）</td></tr>
<tr><td>彩色顯像</td><td>A68KRT370X</td></tr>
<tr><td>揚聲器</td><td>13cm×6cm（×2）
12cm×6cm（×1）
6cm×4cm（×2）</td></tr>
<tr><td>聲音輸出</td><td>12瓦×2+10瓦</td></tr>
<tr><td>電源</td><td>交流 110伏/127伏/220伏 50/60赫
交流 220伏-240伏 50/60赫（只-081）</td></tr>
<tr><td rowspan="4">頻道範圍
（頻率範圍
48兆赫～294兆赫
470兆赫～863兆赫）</td><td rowspan="4">CCIR　：E2～12, E21～69,
01～3, S1～10, S11～20
OIRT　：R1～12, R21～69
日本　：J1～12, J13～62
美國　：US2～13, J～W,
US14～69
香港,英國　：UK21～69
中國　：C1～12, C13～57</td><td>電力消耗</td><td>180瓦</td></tr>
<tr><td>重量（公斤）</td><td>45.0</td></tr>
<tr><td>外形尺寸(厘米)
(寬×高×深)</td><td>76.0×59.0×49.5</td></tr>
<tr><td>製造國</td><td>日 本</td></tr>
</table>

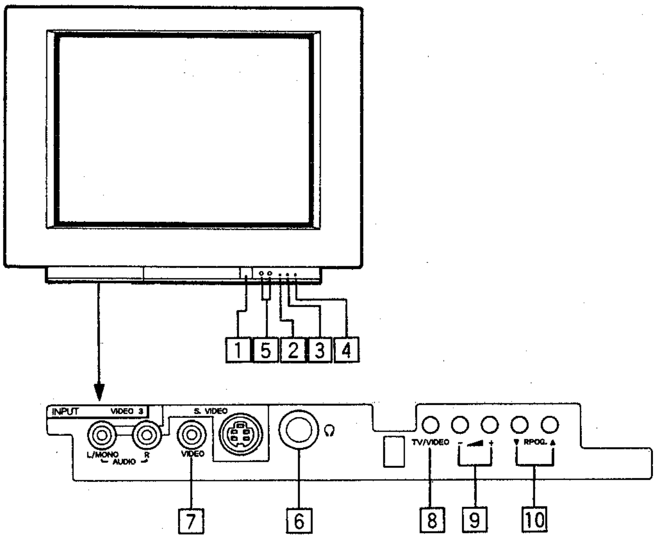
※爲改進性能而變更上述規格時恕不另通知。

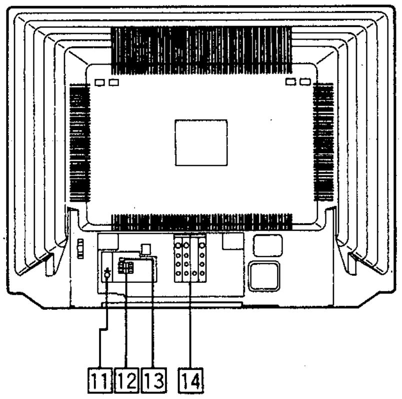
主要優點

1　先進的全機能遙控裝置

2　前面圖像輸入端子

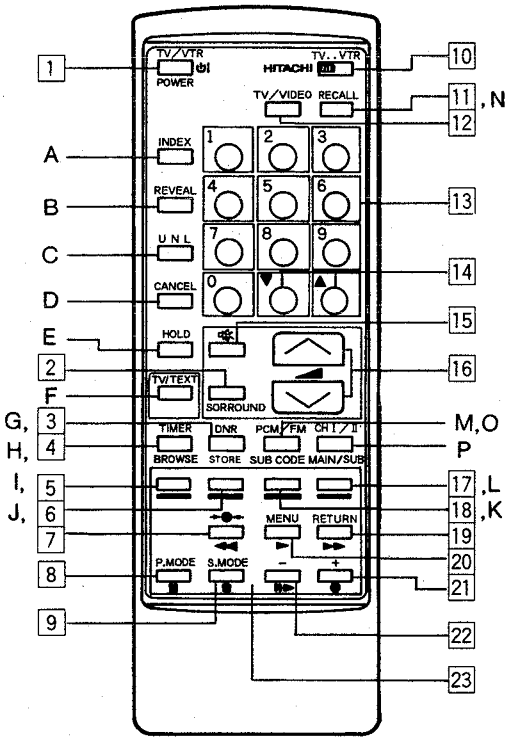
各種調整機件的名稱


1
5
2
3
4
INPUT
VIDEO 3
S. VIDEO
L/MONO
AUDIO
R
VIDEO
TV/VIDEO
RPOG.
7
6
8
9
10



1	電源通/斷開關
2	電源指示燈
3	等待指示燈
4	ON TIMER(定時動作中)指示燈
5	遙控接收部
6	耳機插孔
7	AV IN(聲音圖像輸入)端子
8	輸入選擇
9	音量升/降
10	節目升/降
11	天線輸入端子
12	外部喇叭端子
13	外部喇叭選擇開關
14	AV IN/OUT (聲音圖像輸入/輸出)端子

遙控發射機


TV／VTR
POWER
HITACHI
TV‥VTR
TV／VIDEO
RECALL
INDEX
REVEAL
U N L
CANCEL
HOLD
TV/TEXT
SORROUND
TIMER
BROWSE
DNR
STORE
PCM／FM
SUB CODE
CH I／II
MAIN/SUB
MENU
RETURN
P.MODE
S.MODE
1
2
3
4
5
6
7
8
9
0
A
B
C
D
E
F
G,
H,
I,
J,
1
2
3
4
5
6
7
8
9
10
11
,N
12
13
14
15
16
M,O
P
17
,L
18
,K
19
20
21
22
23

1	電源通／斷	12	輸入選擇
2	環繞聲效果	13	節目選擇器
3	動態減噪鈕	14	節目昇／降
		15	靜噪
4	定時器	16	音量昇／降
5	紅	17	藍
6	綠	18	黃
7	正規化	19	回復
8	圖像模式	20	菜譜
9	聲音模式	21	昇
10	電視／錄像機選擇	22	降
11	召回	23	專用的錄像機鈕

A～N 表示TELETEXT時的鍵機能
O，P 表示聲音多重時的鍵機能

SAFETY PRECAUTIONS

WARNING: Since the chassis of this receiver is connected to one side of the Mains Supply during operation, service should not be attempted by anyone unfamiliar with the precautions necessary when working on this type of equipment. The following precautions should be observed.

1. Do not install, remove, or handle the picture tube in any manner unless shatter-proof goggles are worn. People not so equipped should be kept away while picture tubes are handled. Keep picture tube away from the body while handling.
2. When replacing chassis in the cabinet, all the protective devices are put back in place, such as; barriers, non-metallic knobs, adjustment and compartment cover or shields, isolation resistors-capacitors, etc.
3. When service is required, observe the oritinal lead dress. Extra care should be taken no assure correct lead dress in the high voltage circuitry area.
4. Always use the manufacturer's replacement component. Especially critical components as indicated on the circuit diagram should not be replaced by other makes. Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
5. Before returning a serviced receiver to the customer, the service technician must thoroughtly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the instrument by the manufacturer has become defective, or inadvertenly defeated during servicing.

   Therefore, the following checks are recommended for the continued protection of the customers and service technicians.

INSULATION

Insulation resistance between the mains poles and any accessible metal parts should not be less than 7MΩ at 500V DC. Also, no flashover or breakdown should occur during the dielectric strength test, to apply 4KV AC for one minute between the mains poles and any accessible metal parts.

X-RADIATION

TUBES: The primary source of X radiation in this receiver is the picture tube. The tube utilized in this chassis is specially constructed to limit X radiation.

For continued X radiation protection, the replacement tube must be the same type as the original, HITACHI approved type.

High Voltage

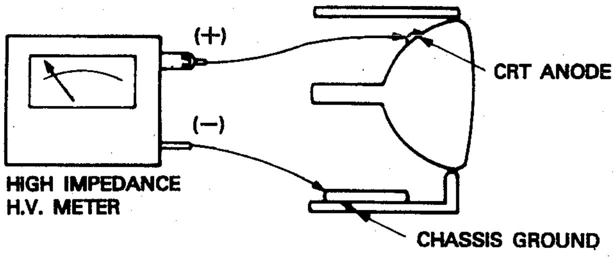
This receiver is provided with a hold down circuit for clearly indicating that voltage has increased in excess of a predetermined value. Comply with all notes described in this Service Manual regarding this hold down circuit when servicing, so that this hold down circuit is operated correctly.

Serviceman warning

With minimum Black Level and Picture, the operating high voltage in this receiver is lower than **31.5kV**. In case any component having influence on the high voltage is replaced, confirm that high voltage with minimum Brightness and contrast is lower than **31.5kV**.

To measure H.V. use a high impedance H.V. meter. Connect (−) to chassis earth and (+) to the CRT anode button. (See the following connection diagram).

NOTE: Turn the power switch off without fail before the connection to the Anode button is made.



PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in HITACHI television receiver have special safety related characteristics. These characteristics are often not evident from visual inspection nor can be protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual. Electrical components having such features are identified by marking with a ⚠ mark in the schematics and on the replacement parts list in this Service manual. The use of a substitute replacement component which does not have the same safety characteristics as the HITACHI recommended replacement one shown in the parts list in this Service Manual, may create electrical shock, fire, X radiation, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current HITACHI Service Manual. A subscription to, or additional copies of, HITACHI Service Manual may be obtained at a nominal charge from your HITACHI SALES CORPORATION.

TECHNICAL CAUTIONS

High voltage limiter circuit operation check

1. Connect the high voltage voltmeter between the CPT anode (anode cap) and GND (CPT grounding lead).
2. Receive the broadcast signal and set the brightness and contrast VRs to max. Set the beam current to 1.15mA±10% : CMT2528 1.45mA±10% : CMT2928 (After cut-off adjustment)
3. Set the AC input voltage to 132±3V.
4. Check that the constant high voltage is 28.7±1.0kV at this time.
5. Turn the switch of the set to off and connect the jig shown in Fig. 3 at both ends of R971 as shown in Fig. 1.
6. With the brightness and contrast VRs left as set in item 2 and with the AC input voltage stabilized at 132V, turn the set on and increase input voltage and check that the picture disappears with a high voltage of 35.0kV or less.
7. Turn the switch of the set to off immediately after the check is completed.
8. Remove the adjust jigs and high voltage voltmeter.

Note: When connecting disconnecting the high voltage voltmeter to from the anode cap, be sure to turn the switch of the set off and do it after the residual high voltage is discharged to the chassis because the high voltage may remain at the anode cap.

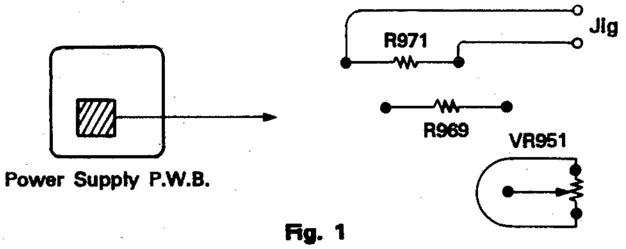


Fig. 1

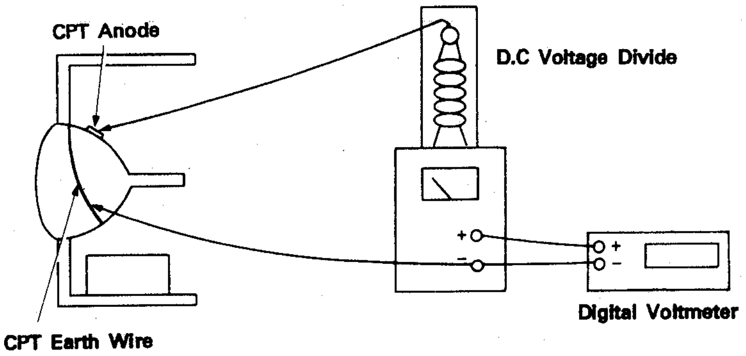


Fig. 2

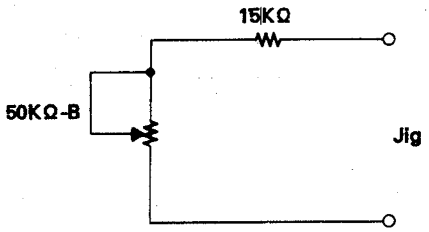


Fig. 3

Specifications

Reception system	625-lines	B.G/I/D.K/H PAL B.G/D.K/K' SECAM NTSC50
	525-lines	M/NTSC NTSC3.58-5.5/6.0/6.5 NTSC4.43-5.5/6.0/6.5 PAL60
Channel coverage (Frequency range 48MHz~294MHz 470MHz~863MHz)		CCIR : E2~12, E21~69, 01~3, S1~10, S11~20 OIRT : R1~12, R21~69 JAPAN : J1~12, J13 ~62 U.S.A. : US2~13, J~W, US14~69 Hong Kong, U.K. : UK21~69 China : C1~12, C13~57

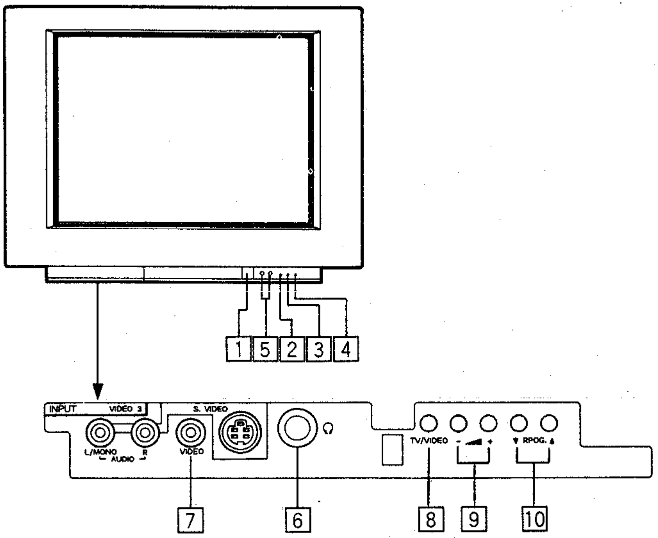
Aerial input	75Ω unbalanced type
Color picture tube	A68KRT370X
Speaker	13cm×6cm(×2) 12cm×6cm(×1) 6cm×4cm(×2)
Sound output	12W×2+10W
Power supply	AC110V/127V/220V 50/60Hz AC220V−240V 50/60Hz (−081 only)
Power consumption	180W
Weight (kg)	45.0
Dimensions W×H×D (cm)	76.0×59.0×49.5
Country of manufacture	Japan

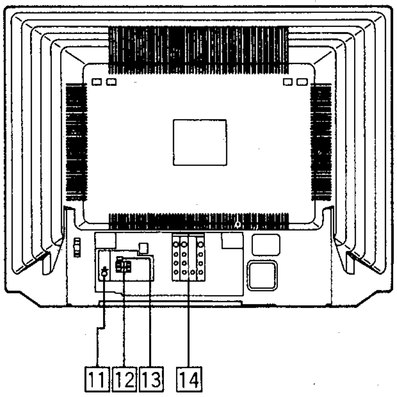
※ Specifications are subject to change without notice to improve performance.

Main Features

1. Advanced full function remote control system
2. Front video input terminals

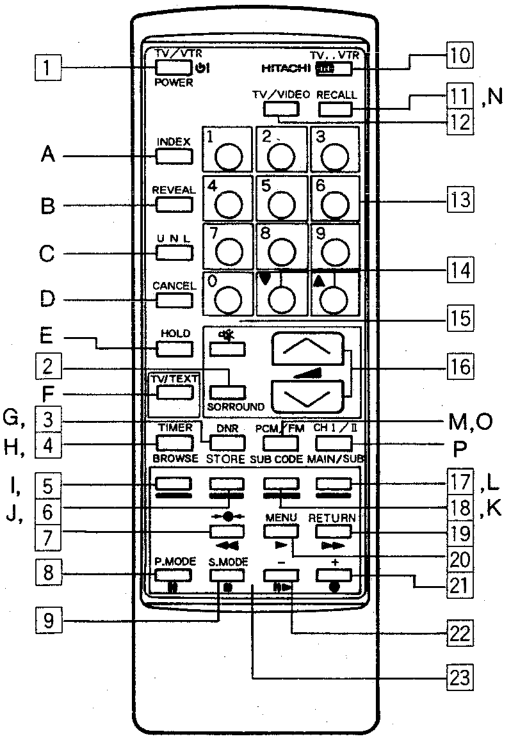
Names of controls


1
5
2
3
4
INPUT
VIDEO 3
S. VIDEO
L/MONO
R
AUDIO
VIDEO
TV/VIDEO
RPOG.
7
6
8
9
10



1	Power ON/OFF switch
2	Power indicater
3	Stand-by indicater
4	ON TIMER indicater
5	Remote control receiver
6	Headphone jack
7	AV IN terminals
8	Input select button
9	Volume up/down button
10	Program up/down button
11	Aerial input terminals
12	External speaker terminals
13	External speaker select switch
14	AV IN/OUT terminals

Remote control transmitter


TV/VTR
POWER
TV..VTR
HITACHI
TV/VIDEO
RECALL
INDEX
REVEAL
U N L
CANCEL
HOLD
TV/TEXT
SORROUND
TIMER
DNR
PCM/FM
CH I/II
BROWSE
STORE
SUB CODE
MAIN/SUB
MENU
RETURN
P.MODE
S.MODE
1
2
3
4
5
6
7
8
9
0
1
A
B
C
D
E
2
F
G, 3
H, 4
I, 5
J, 6
7
8
9
10
11 ,N
12
13
14
15
16
M,O
P
17 ,L
18 ,K
19
20
21
22
23

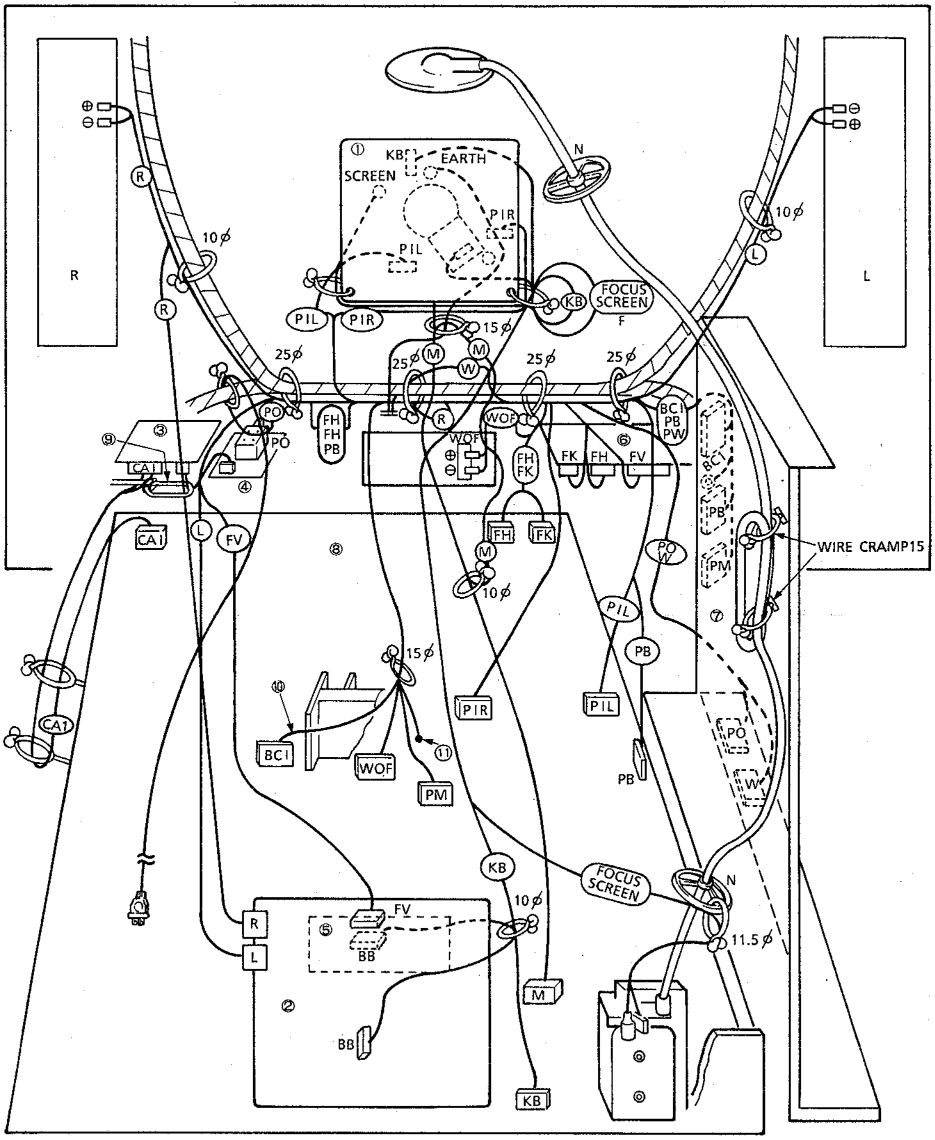
1	Power ON/OFF	12	Input select
2	Sorround	13	Programme selecter
3	Dynamic noise reduction	14	Program up/down
		15	Mute
4	Timer	16	Volume up/down
5	Red	17	Yellow
6	Green	18	Blue
7	Normalize	19	Return
8	Picture mode	20	Menu
9	Sound mode	21	Up
10	TV/VTR select	22	Down
11	Recall	23	Exclusive VTR buttons

A~N shows the key function in Teletext mode.

O, P shows the key function in Sound multiplex mode.

布 線 圖

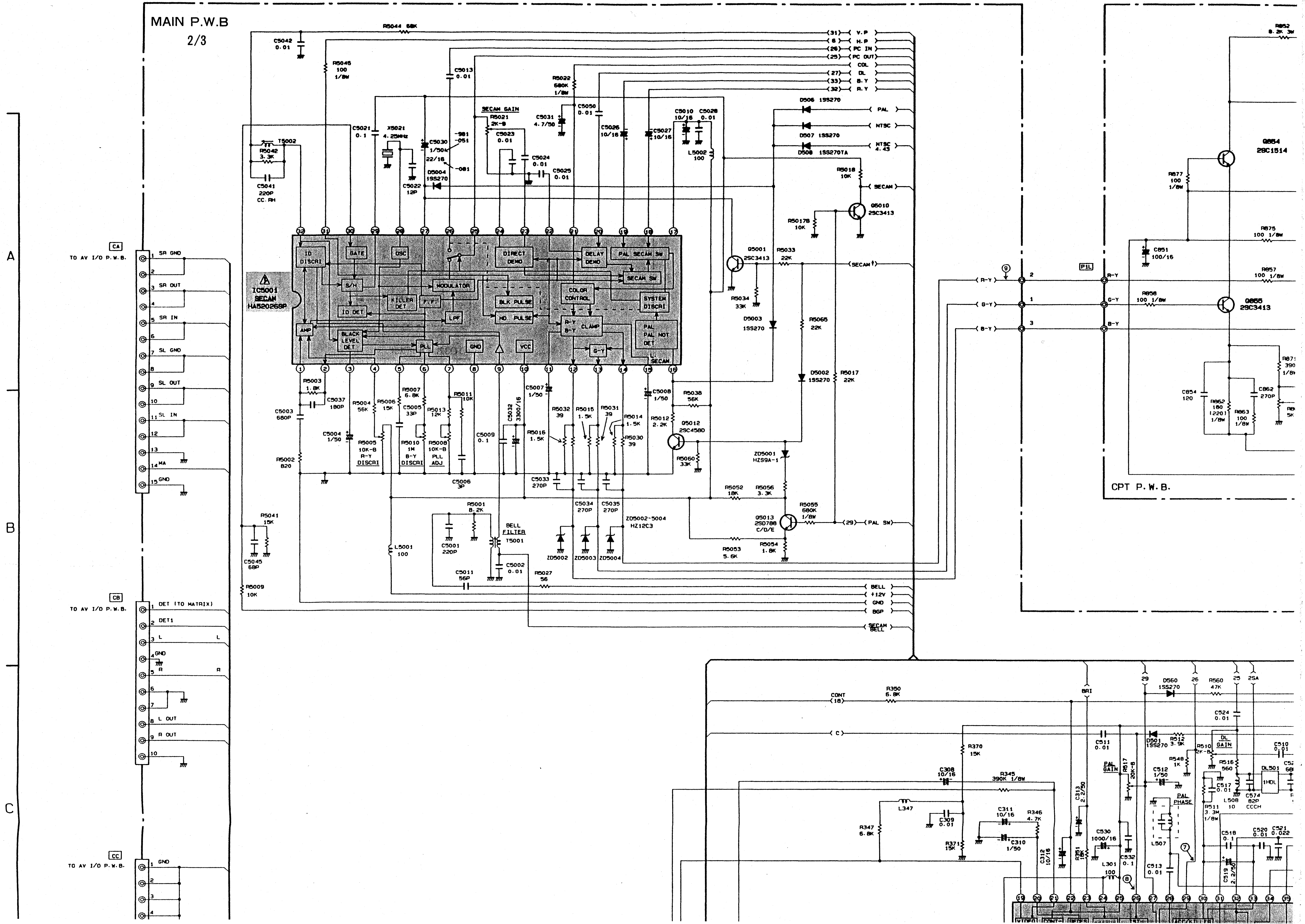
WIRING DIAGRAM

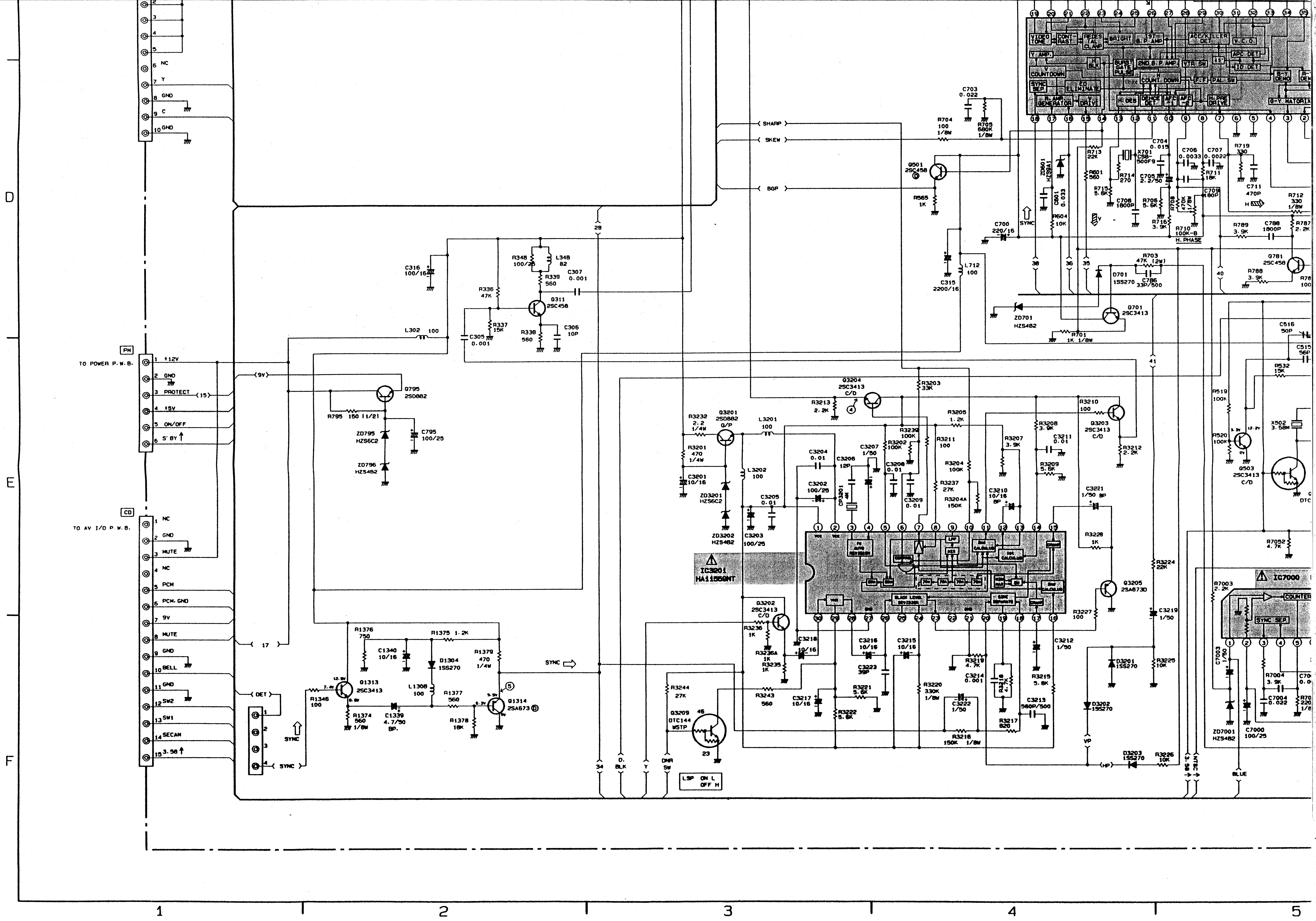

① KB EARTH SCREEN
PIR
PIL
N
R
L
10φ
15φ
25φ
11.5φ
FOCUS SCREEN
KB
F
M
W
PO
FH FH PB
WOF
⊕ ⊖
FH FK
FK FH FV
BCI PB PW
BCI
PB
PM
WIRE CRAMP15
③
④
⑥
⑦
⑧
⑨
⑩
⑪
CA1
FV
PIR
PIL
PB
BCI
WOF
PM
FV
BB
⑤
②
R
L
M
KB
PO
W
FOCUS SCREEN
FH
FK
⊕
⊖

1	ＣＰＴ印刷電路板	CPT P.W.B
2	控制印刷電路板Ａ	Control P.W.B A
3	控制印刷電路板Ｂ	〃 B
4	控制印刷電路板Ｃ	〃 C
5	控制印刷電路板Ｄ	〃 D
6	控制印刷電路板Ｅ	〃 E
7	功率輸出印刷電路板	Power Output P.W.B
8	主印刷電路板	Main P.W.B
9	用繁帶捆起來，使３Ｐ接續器的電線不與電源開關的端子接觸。	Bind the wires of the 3P connector using a tie-band so that the wires do not touch the terminals of the power switch.
10	布線時請小心不要觸到放熱板	Perform wiring without touching the heat sink.
11	沿着ＰＭ接續器布線	Perform wiring along the PM connector.

基本線路圖／ BASIC CIRCUIT DIAGRAM

製作安全上的注意： 附帶有 ⚠ 記號的組件具有出於安全方面考慮的特殊性能。
因此在更換這些組件時，請詳細閱讀本檢修手冊上"製品安全上的注意"一節。
請小心，切勿因檢修不當而降低機器的安全性能。


MAIN P.W.B
2/3
A
B
C
CA
TO AV I/O P.W.B.
SR GND
SR OUT
SR IN
SL GND
SL OUT
SL IN
MA
GND
CB
TO AV I/O P.W.B.
DET (TO MATRIX)
DET1
L
R
L OUT
R OUT
CC
TO AV I/O P.W.B.
IC5001
SECAM
HA52026SP
ID DISCRI
GATE
OSC
S/H
KILLER DET
F.F.
MODULATOR
LPF
ID DET
AMP
BLACK LEVEL DET
PLL
GND
VCC
DIRECT DEMO
BLK PULSE
HD PULSE
DELAY DEMO
PAL SECAM SW
SECAM SW
COLOR CONTROL
SYSTEM DISCRI
R-Y
B-Y
CLAMP
PAL PAL NOT DET
G-Y
L: SECAM
SECAM GAIN
R5044 68K
C5042 0.01
R5045 100 1/8W
C5013 0.01
R5022 680K 1/8W
C5050 0.01
C5031 4.7/50
C5026 10/16
C5027 10/16
C5010 10/16
C5028 0.01
L5002 100
T5002
R5042 3.3K
C5041 220P CC.RH
C5021 0.1
X5021 4.25MHz
C5030 1/50
22/16
D5004 1SS270
C5022 12P
R5021 2K-B
C5023 0.01
C5024 0.01
C5025 0.01
D506 1SS270
D507 1SS270
D508 1SS270TA
R5018 10K
Q5010 2SC3413
R5017B 10K
Q5001 2SC3413
R5033 22K
R5034 33K
D5003 1SS270
R5065 22K
D5002 1SS270
R5017 22K
R5038 56K
R5012 2.2K
Q5012 2SC4580
R5060 33K
ZD5001 HZS9A-1
R5052 18K
R5056 3.3K
Q5013 2SD786 C/D/E
R5055 680K 1/8W
R5053 5.6K
R5054 1.8K
R5003 1.8K
C5037 180P
C5003 680P
R5004 56K
R5006 15K
R5007 6.8K
C5005 33P
R5013 12K
R5011 10K
C5004 1/50
R5005 10K-B R-Y DISCRI
R5010 1M B-Y DISCRI
R5008 10K-B PLL ADJ
C5009 0.1
C5032 3300/16
C5006 3P
C5007 1/50
R5032 39
R5015 1.5K
R5031 39
R5014 1.5K
R5016 1.5K
R5030 39
C5008 1/50
C5033 270P
C5034 270P
C5035 270P
ZD5002-5004 HZ12C3
ZD5002
ZD5003
ZD5004
R5002 820
R5041 15K
C5045 68P
R5009 10K
L5001 100
R5001 8.2K
C5001 220P
BELL FILTER T5001
C5002 0.01
C5011 56P
R5027 56
V.P
H.P
PC IN
PC OUT
COL
DL
B-Y
R-Y
PAL
NTSC
NTSC 4.43
SECAM
PAL SW
BELL
+12V
GND
BGP
SECAM BELL
P1L
CPT P.W.B.
R852 8.2K 3W
Q854 2SC1514
R877 100 1/8W
R875 100 1/8W
C851 100/16
R857 100 1/8W
R856 100 1/8W
Q855 2SC3413
C854 120
R862 180 (220) 1/8W
C862 270P
R863 100 1/8W
CONT
R350 6.8K
BRI
D560 1SS270
R560 47K
C524 0.01
C511 0.01
D501 1SS270
R512 3.9K
R510 2K-B
DL GAIN
C510 0.01
R370 15K
C308 10/16
R345 390K 1/8W
R548 1K
R516 560
DL501 1HDL
PAL GAIN
R517 20K-B
C512 1/50
C517 0.01
L508 10
C574 82P CCCH
L347
C309 0.01
C311 10/16
R346 4.7K
C310 1/50
R347 6.8K
R371 15K
C313 2.2/50
C312 10/16
C530 1000/16
C532 0.1
L301 100
PAL PHASE
L507
R511 3.3M 1/8W
C518 0.1
C520 0.01
C521 0.022
C519 2.2/50
C513 0.01
VIDEO
CONT
ACC/KILLER

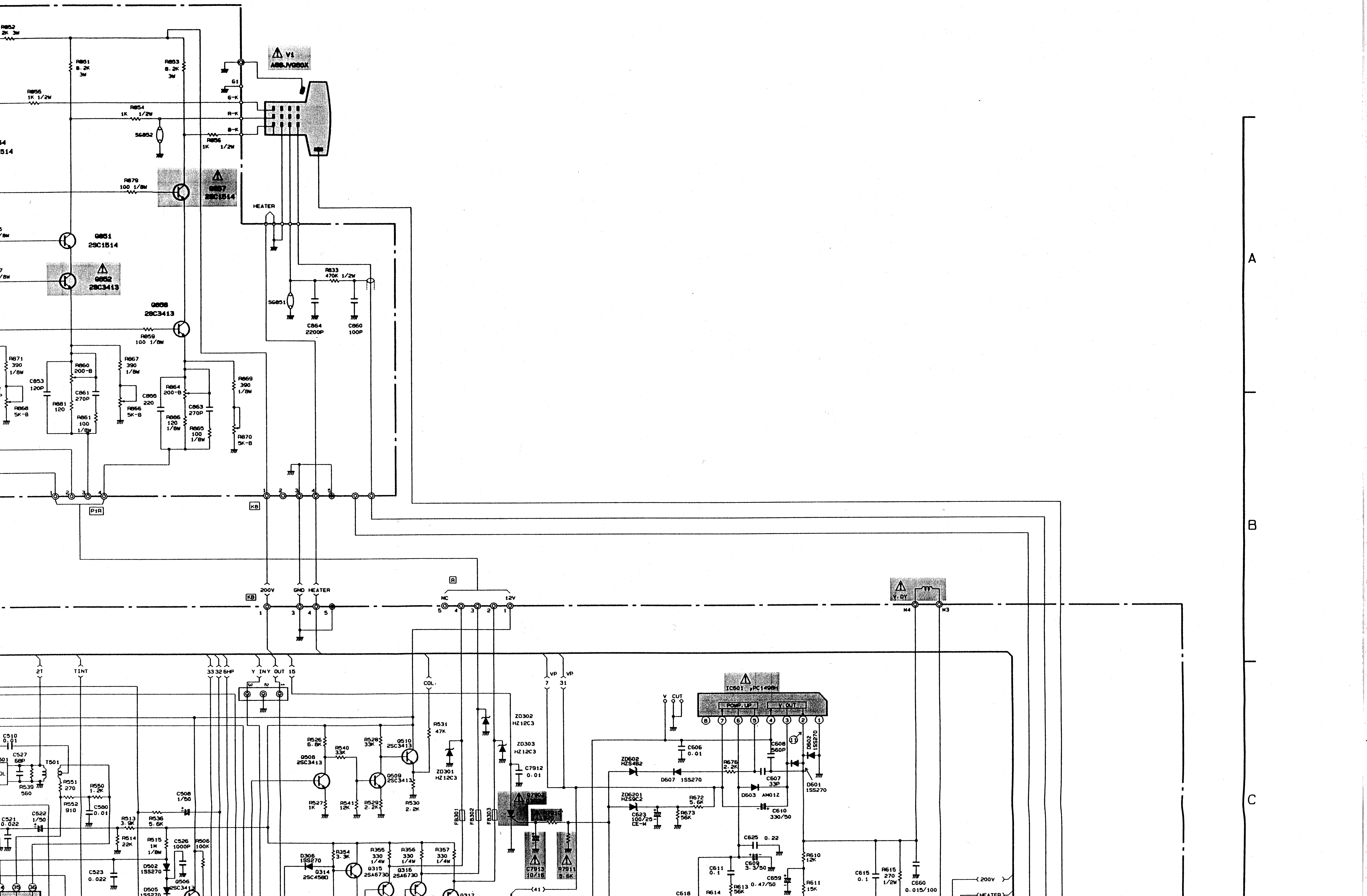

D
E
F
1
2
3
4
5
PH
TO POWER P.W.B.
1 +12V
2 GND
3 PROTECT
4 +5V
5 ON/OFF
6 S'BY
CD
TO AV I/O P.W.B.
1 NC
2 GND
3 MUTE
4 NC
5 PCM
6 PCM.GND
7 9V
8 MUTE
9 GND
10 BELL
11 GND
12 SW2
13 SW1
14 SECAM
15 3.58
6 NC
7 Y
8 GND
9 C
10 GND
(9V)
(15)
17
DET
SYNC
SHARP
SKEW
BGP
Q795 2SD882
R795 150 (1/2)
ZD795 HZS6C2
ZD796 HZS4B2
C795 100/25
C316 100/16
R336 47K
R337 15K
R348 100/2
L348 82
R339 560
C307 0.001
Q311 2SC458
R338 560
C306 10P
C305 0.001
L302 100
R1376 750
C1340 10/16
R1375 1.2K
D1304 1SS270
R1379 470 1/4W
Q1313 2SC3413
R1346 100
R1374 560 1/8W
C1339 4.7/50 BP.
L1308 100
R1377 560
R1378 18K
Q1314 2SA673
28
34
D.BLK
Y
DNR SW
LSP ON L OFF H
IC3201 HA11566NT
Q3201 2SD882 Q/P
R3232 2.2 1/4W
R3201 470 1/4W
C3201 10/16
ZD3201 HZS6C2
ZD3202 HZS4B2
L3201 100
L3202 100
C3203 100/25
C3204 0.01
C3205 0.01
C3206 12P
C3202 100/25
CP3201
C3207 1/50
C3208 0.01
C3209 0.01
Q3204 2SC3413 C/D
R3213 2.2K
R3203 33K
R3239 100K
R3202 100K
R3205 1.2K
R3211 100
R3204 100K
R3237 27K
R3204A 150K
R3207 3.9K
R3208 3.9K
C3211 0.01
R3209 5.6K
C3210 10/16 BP
R3210 100
Q3203 2SC3413 C/D
R3212 2.2K
C3221 1/50 BP
R3228 1K
Q3205 2SA673
R3227 100
R3224 22K
C3219 1/50
Q3202 2SC3413 C/D
R3236 1K
R3236A 1K
R3235 1K
C3218 10/16
C3216 10/16
C3215 10/16
C3223 39P
R3221 5.6K
R3222 5.6K
C3217 10/16
R3244 27K
R3243 560
Q3209 DTC144 WSTP
R3220 330K 1/8W
C3214 0.001
C3222 1/50
R3219 4.7K
R3218 150K 1/8W
R3217 820
C3213 560P/500
R3215 5.6K
C3212 1/50
D3201 1SS270
D3202 1SS270
R3225 10K
D3203 1SS270
R3226 10K
VP
(HP)
BLUE
C703 0.022
R704 100 1/8W
R705 680K 1/8W
Q501 2SC458
R565 1K
ZD601 HZ39A1
C601 0.033
R604 10K
C700 220/16
SYNC
L712 100
C315 2200/16
R713 22K
R601 560
R715 5.6K
X701 CSB-500F9
R714 270
C704 0.015
C705 2.2/50
C708 1800P
R706 5.6K
R716 3.9K
C706 0.0033
C707 0.0022
R711 18K
R708 470K 1/8W
C709 180P
R710 100K-B H.PHASE
R719 330
C711 470P
R712 330 1/8W
R789 3.9K
C788 1800P
R787 2.2K
R703 47K (2W)
D701 1SS270
C786 33P/500
Q781 2SC458
R788 3.9K
Q701 2SC3413
ZD701 HZS4B2
R701 1K 1/8W
36
35
40
41
C516 50P
C515 56P
R532 15K
R519 100K
R520 100K
Q503 2SC3413 C/D
X502 3.58M
R7052 4.7K
R7003 2.2K
IC7000
COUNTER
SYNC SEP.
C7003 1/50
ZD7001 HZS4B2
C7000 100/25
R7004 3.9K
C7004 0.022
VIDEO TONE
CONTRAST
PEDESTAL CLAMP
BRIGHT
1ST B.P AMP
ACC/KILLER DET
V.C.O.
Y AMP.
H BLK
BURST GATE PULSE
2ND B.P AMP
VTR SW
APC DET
ID DET
V COUNTDOWN
COUNT DOWN
F.F
PAL SW
B-Y DEMO
SYNC SEP
ED ELIMINATE
R AMP GENERATOR
DRIVE
H.DES
DEFCE DET
AFC
H.PRE DRIVE
G-Y MATORIX

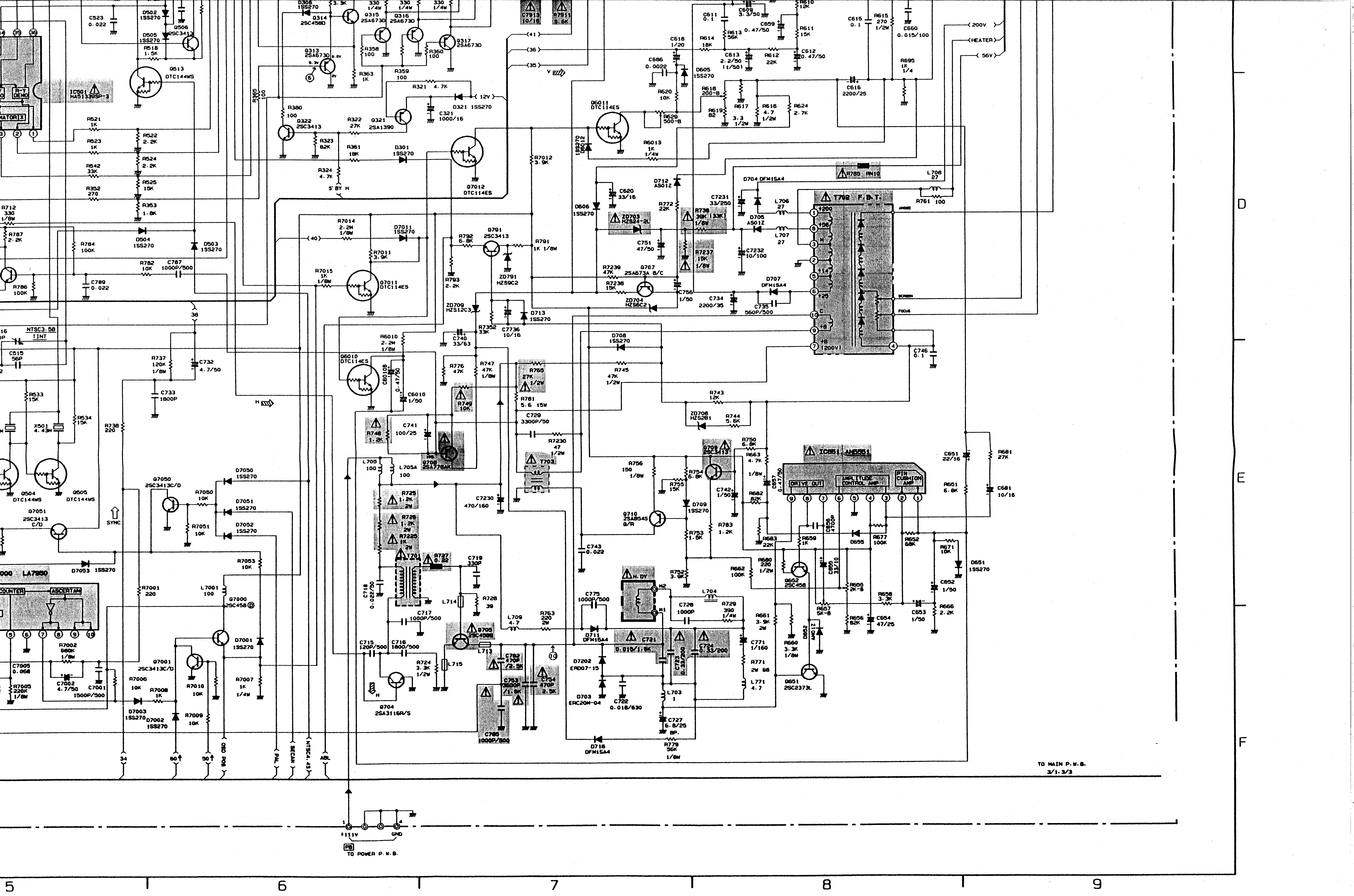
● 因爲本圖是基本線路圖，爲改進性能，各元件的數值將有變動。

● 上述所有直流電壓值由測試儀(內組100KΩ /V)測得。

● 復合色帶信號的電壓包括了標準色帶信號電壓。

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.


V1
A68JVQ80X
G1
G-K
R-K
B-K
R852 2K 3W
R851 8.2K 3W
R853 8.2K 3W
R855 1K 1/2W
R854 1K 1/2W
SG852
R856 1K 1/2W
R879 100 1/8W
Q857 2SC1514
Q851 2SC1514
Q852 2SC3413
Q858 2SC3413
R859 100 1/8W
HEATER
R833 470K 1/2W
SG851
C864 2200P
C860 100P
R871 390 1/8W
C853 120P
R868 5K-B
R881 120
R860 200-B
C861 270P
R861 100 1/8W
R867 390 1/8W
R866 5K-B
C856 220
R864 200-B
R886 120 1/8W
C863 270P
R865 100 1/8W
R869 390 1/8W
R870 5K-B
P1R
KB
200V
GND
HEATER
NC
12V
V.DY
M4
M3
A
B
C
2T
TINT
33 32 6HP
Y INY OUT 15
COL.
VP 7
VP 31
V CUT
IC601 μPC1498H
POWP UP
V. OUT
ZD302 HZ12C3
ZD303 HZ12C3
ZD301 HZ12C3
C7912 0.01
R7902
R7910
C7913 10/16
R7911 5.6K
FB301
FB302
FB303
C510 0.01
C527 68P
T501
R539 560
R551 270
R552 910
R550 1.2K
C580 0.01
C508 1/50
R513 3.9K
R536 5.6K
R514 22K
R515 1M 1/8W
C526 1000P
R506 100K
C521 0.022
C522 1/50
C523 0.022
D502 1SS270
D505 1SS270
Q506 2SC3413
R526 6.8K
R540 33K
Q508 2SC3413
R528 33K
Q510 2SC3413
Q509 2SC3413
R531 47K
R527 1K
R541 12K
R529 2.2K
R530 2.2K
D306 1SS270
R354 3.3K
Q314 2SC4580
R355 330 1/4W
R356 330 1/4W
R357 330 1/4W
Q315 2SA673D
Q316 2SA6730
Q317
C606 0.01
C608 560P
ZD602 HZS4B2
D607 1SS270
R676 2.2K
C607 33P
D602 1SS270
D601 1SS270
D603 AM01Z
ZD6201 HZS9C2
R672 5.6K
C623 100/25 CE-M
R673 56K
C610 330/50
C625 0.22
C609 3.3/50
R610 12K
C611 0.1
R613 56K
C659 0.47/50
R611 15K
C618
R614
C615 0.1
R615 270 1/2W
C660 0.015/100
200V
HEATER
(41)

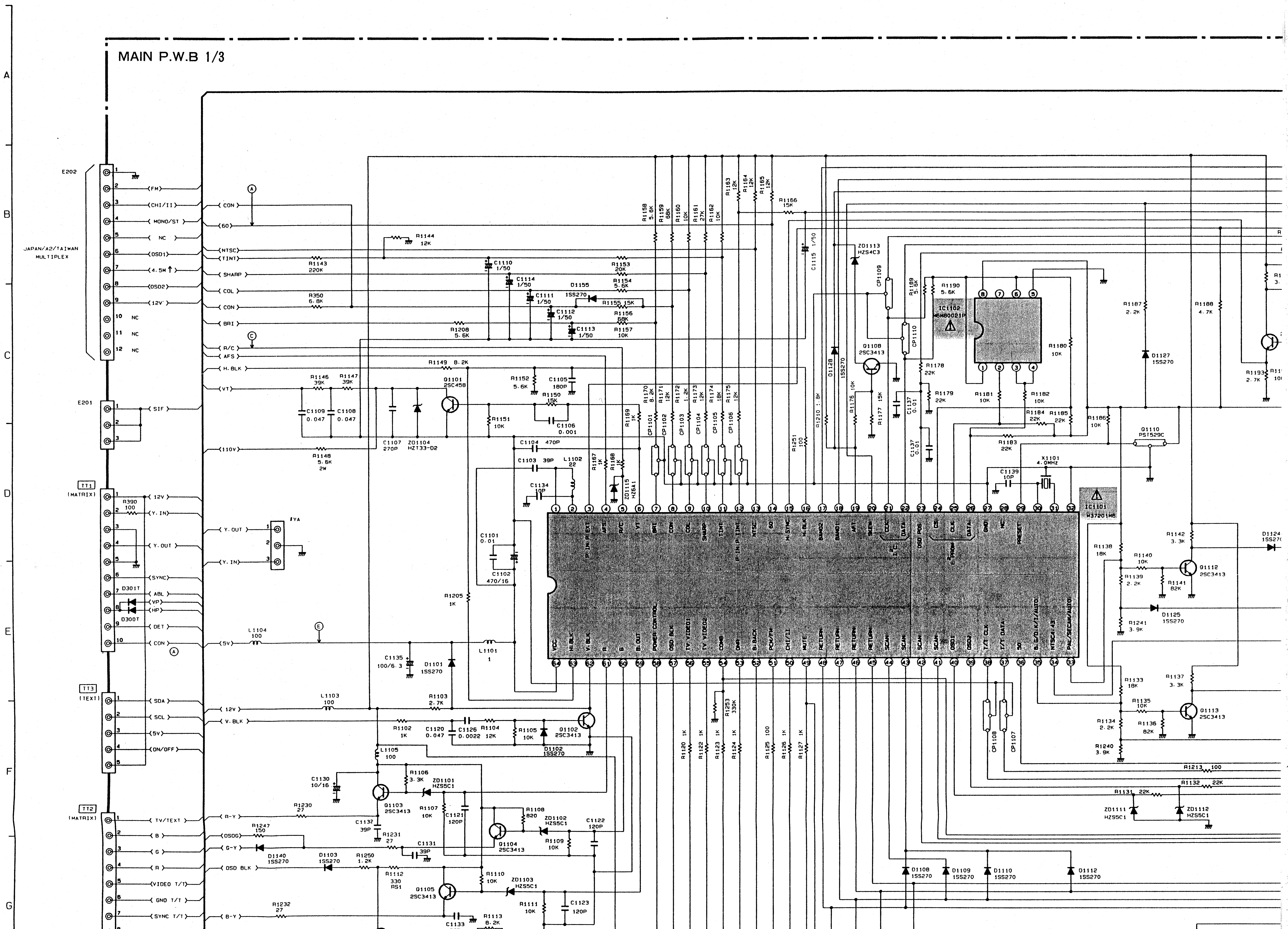

IC501 HA51339SP-3
R-Y DEMO
MATRIX
Q513 DTC144WS
Q506 2SC3413
D502 1SS270
D505 1SS270
R518 1.5K
C523 0.022
R521 1K
R522 2.2K
R523 1K
R524 2.2K
R542 33K
R525 15K
R352 270
R353 1.8K
R712 330 1/8W
R787 2.2K
R784 100K
D504 1SS270
D503 1SS270
R782 10K
C787 1000P/500
C789 0.022
R786 100K
NTSC3.58 TINT
C515 56P
R737 120K 1/8W
C732 4.7/50
C733 1800P
R533 15K
R534 15K
X501 4.43M
R738 220
Q504 DTC144WS
Q505 DTC144WS
Q7051 2SC3413 C/D
SYNC
Q7050 2SC3413C/D
R7050 10K
R7051 10K
D7050 1SS270
D7051 1SS270
D7052 1SS270
D7053 1SS270
LA7950
COUNTER
ASCERTAIN
R7053 10K
R7001 220
L7001 100
Q7000 2SC458
D7001 1SS270
R7007 1K 1/4W
Q7001 2SC3413C/D
R7010 10K
R7009 10K
R7006 10K
R7008 1K
R7002 680K 1/8W
C7005 0.068
C7002 4.7/50
C7001 1500P/500
R7005 220K 1/8W
D7003 1SS270
D7002 1SS270
34
60
50
POS
PAL
SECAM
NTSC4.43
ABL
D306 1SS270
Q314 2SC4580
Q315 2SA6730
Q316 2SA6730
Q317 2SA6730
R358 100
R360 100
Q313 2SA6730
R363 1K
R359 100
R321 4.7K
D321 1SS270
12V
C321 1000/16
Q321 2SA1390
R322 27K
Q322 2SC3413
R380 100
R365 100
R323 82K
R361 18K
D301 1SS270
R324 4.7K
S'BY H
Q7012 DTC114ES
R7012 3.9K
C7913 10/16
R7911 5.6K
(41)
(36)
(35)
(40)
R7014 2.2M 1/8W
D7011 1SS270
R7011 3.9K
R7015 1K 1/8W
Q7011 DTC114ES
R792 6.8K
Q791 2SC3413
R791 1K 1/8W
R793 2.2K
ZD791 HZS9C2
ZD709 HZS12C3
R7352 33K
C7736 10/16
D713 1SS270
C740 33/63
R6010 2.2M 1/8W
Q6010 DTC114ES
C6010B 0.47/50
C6010 1/50
R776 47K
R747 47K 1/8W
R765 27K 1/2W
R781 5.6 15W
R749 10K
R748 1.2K
C741 100/25
Q706 2SA778AK
L705 100
L705A 100
C729 3300P/50
R7230 47 1/2W
T703
R725 1.2K 2W
R726 1.2K 2W
R7225 1K 2W
T701
R727 0.22
C719 330P
C718 0.022/50
L714
R728 39
C717 1000P/500
C7230 470/160
C715 120P/500
C716 1800/500
R724 3.3K 1/2W
L715
Q704 2SA3116A/S
Q705 2SC4589
L713
L709 4.7
R763 220 2W
C782 470P /2.5K
C753 3600P /1.6K
C754 470P 2.5K
C785 1000P/500
H
V
C611 0.1
C609 3.3/50
R613 56K
C659 0.47/50
R610 12K
R611 15K
C618 1/20
R614 18K
C686 0.0022
D605 1SS270
C613 2.2/50 (1/50)
R612 22K
C612 0.47/50
R620 10K
R618 200-B
R619 82
R617 3.3 1/2W
R616 4.7 1/2W
R624 2.7K
R629 500-B
Q6011 DTC114ES
D6012 1SS270
R6013 1K 1/4W
C615 0.1
R615 270 1/2W
C660 0.015/100
C616 2200/25
R695 1K 1/4
200V
HEATER
56V
D712 AS01Z
C620 33/16
D606 1SS270
R772 22K
ZD703 HZS24-2L
R736 39K 13K 1/8W
C7231 33/250
D704 DFM1SA4
R785 RN10
L708 27
R761 100
L706 27
D705 AS01Z
L707 27
C751 47/50
R7237 15K 1/8W
C7232 10/100
R7239 47K
Q707 2SA673A B/C
R7238 15K
ZD704 HZS6C2
C756 1/50
C734 2200/35
D707 DFM1SA4
C735 560P/500
T702 F.B.T.
+200
+56
H
+14
+25
+8
+B (200V)
ANODE
SCREEN
FOCUS
C746 0.1
D708 1SS270
R745 47K 1/2W
R743 12K
ZD706 HZS2B1
R744 5.6K
R750 6.8K
Q709 2SC3413
R663 4.7K 1/8W
R756 150 1/8W
R754 6.8K
R755 15K
C742 1/50
D709 1SS270
Q710 2SA854S Q/R
R753 1.5K
R783 1.2K
C743 0.022
R752 3.9K
H.DY
C775 1000P/500
C728 1000P
L704
R729 390 1/4W
D711 DFM1SA4
C721 0.015/1.6K
C723 0.33/200
C724 0.33/200
D7202 ERD07-15
D703 ERC20M-04
C722 0.018/630
L703 1
C727 6.8/25 BP.
D716 DFM1SA4
R779 56K 1/8W
C771 1/160
R771 2W 68
L771 4.7
R661 3.9K 2W
R660 3.3K 1/8W
Q651 2SC2373L
IC651 AN5551
DRIVE OUT
AMPLITUDE CONTROL AMP
PIN CUSHION AMP
C657 0.47/50
R682 82K
R683 22K
R659 1K
C656 4700P
D655
R677 100K
R652 68K
R662 100K
R680 220 1/2W
Q652 2SC458
C655 33/10
R655 2K-B
R657 5K-B
R658 3.3K
R656 82K
C654 47/25
D652 AM01Z
C651 22/16
R681 27K
R651 6.8K
C681 10/16
R671 10K
D651 1SS270
C652 1/50
C653 1/50
R666 2.2K
TO MAIN P.W.B. 3/1.3/3
+111V
GND
P8 TO POWER P.W.B.
D
E
F
5
6
7
8
9

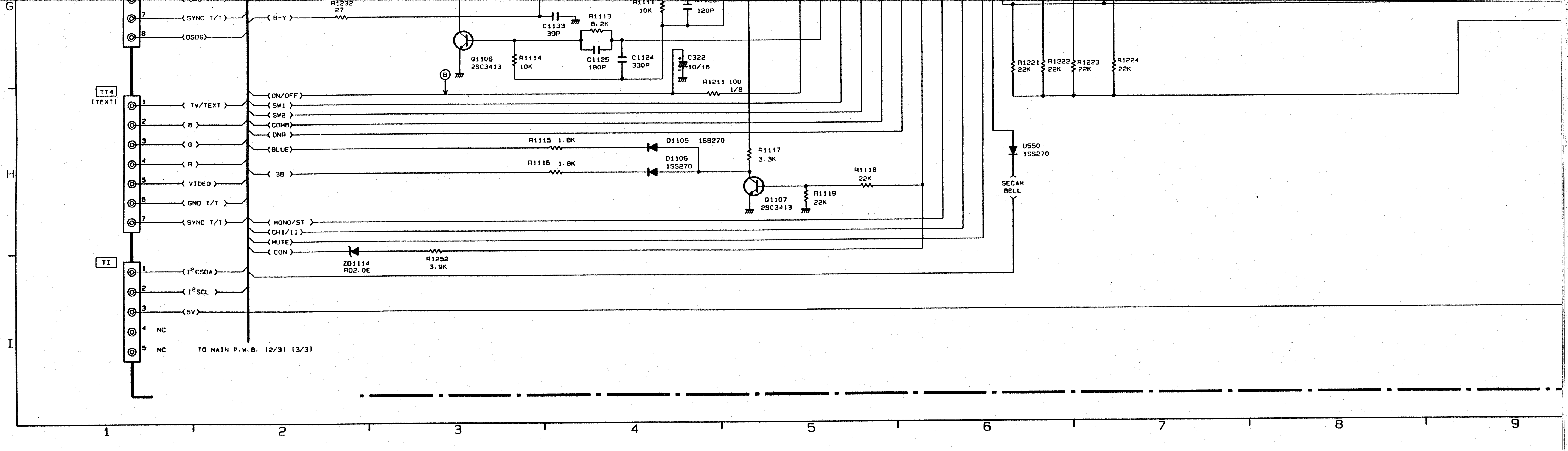
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100kΩ/V).

  Voltage taken on a complex color bar signal including a standard color bar signal.

基本線路圖／ BASIC CIRCUIT DIAGRAM

製作安全上的注意： 附帶有 ⚠ 記號的組件具有出於安全方面考慮的特殊性能。
因此在更換這些組件時，請詳細閱讀這本檢修手冊上"製品安全上的注意"一節。
請小心，切勿因檢修不當而降低機器的安全性能。


MAIN P.W.B 1/3
A
B
C
D
E
F
G
E202
JAPAN/A2/TAIWAN
MULTIPLEX
FM
CHI/II
MONO/ST
NC
OSD1
4.5M
OSD2
12V'
CON
60
NTSC
TINT
SHARP
COL
BRI
R/C
AFS
H.BLK
VT
SIF
110V
E201
TT1 (MATRIX)
12V
Y.IN
Y.OUT
SYNC
ABL
VP
HP
DET
5V
D301T
D300T
TT3 (TEXT)
SDA
SCL
ON/OFF
TT2 (MATRIX)
TV/TEXT
B
G
R
VIDEO T/T
GND T/T
SYNC T/T
R-Y
OSDG
G-Y
OSD BLK
B-Y
V.BLK
R1143 220K
R350 6.8K
R1144 12K
R1208 5.6K
R1149 8.2K
R1146 39K
R1147 39K
C1109 0.047
C1108 0.047
C1107 270P
ZD1104 HZT33-02
Q1101 2SC458
R1148 5.6K 2W
R1152 5.6K
C1105 180P
R1150 15K
R1151 10K
C1106 0.001
C1104 470P
C1103 39P
L1102 22
C1134 10P
C1101 0.01
C1102 470/16
R1205 1K
L1104 100
C1135 100/6.3
D1101 1SS270
L1101 1
L1103 100
R1103 2.7K
R1102 1K
C1120 0.047
C1126 0.0022
R1104 12K
R1105 10K
Q1102 2SC3413
D1102 1SS270
L1105 100
C1130 10/16
R1106 3.3K
ZD1101 HZS5C1
Q1103 2SC3413
R1107 10K
C1121 120P
R1230 27
R1247 150
C1132 39P
R1231 27
C1131 39P
D1140 1SS270
D1103 1SS270
R1250 1.2K
R1112 330 RS1
Q1105 2SC3413
R1232 27
C1133
R1113 8.2K
R1110 10K
ZD1103 HZS5C1
R1111 10K
C1123 120P
Q1104 2SC3413
R1108 820
ZD1102 HZS5C1
R1109 10K
C1122 120P
C1110 1/50
C1114 1/50
C1111 1/50
C1112 1/50
C1113 1/50
D1155 1SS270
R1153 20K
R1154 5.6K
R1155 15K
R1156 68K
R1157 10K
R1158 5.6K
R1159 68K
R1160 10K
R1161 27K
R1162 10K
R1163 12K
R1164 12K
R1165 12K
R1166 15K
C1115 1/50
ZD1113 HZS4C3
CP1109
CP1110
R1189 5.6K
R1190 5.6K
IC1102 M6M80021P ⚠
Q1108 2SC3413
D1128 1SS270
R1178 22K
R1179 22K
R1175 10K
R1177 15K
R1210 1.8K
C1137 0.01
R1180 10K
R1181 10K
R1182 10K
R1184 22K
R1185 22K
R1183 22K
R1186 10K
Q1110 PST529C
R1187 2.2K
R1188 4.7K
D1127 1SS270
R1193 2.7K
X1101 4.0MHz
C1139 10P
R1170 8.2K
R1171 12K
R1172 12K
R1173 1.2K
R1174 18K
R1175 12K
R1169 1K
R1167 1K
R1168 1K
ZD1115 HZ6A1
CP1101
CP1102
CP1103
CP1104
CP1105
CP1106
R1251 100
IC1101 M37201M6 ⚠
P.IN.P.EXT
AFS
R/C
VT
BRI
CON
COL
SHARP
TINT
P.IN.P.TINT
NTSC
60
H.SYNC
H.BLK
BAND2
BAND1
AFT
SKEW
CLK
DATA
OSD POS
CS
CLK
DATA
GND
NC
PRESET
VCC
H.BLK
V.BLK
R
G
B
B.OUT
POWER CONTROL
OSD BLK
TV VIDEO1
TV VIDEO2
COMB
DMS
B.BACK
PCM/FM
CHI/II
MUTE
RETURN
SCAN
OSD1
OSD2
T/T CLK
T/T DATA
50
B.G/D.K/I/AUTO
NTSC4.43
PAL/SECAM/AUTO
R1253 330K
R1120 1K
R1122 1K
R1123 1K
R1124 1K
R1125 100
R1126 1K
R1127 1K
CP1108
CP1107
R1142 3.3K
R1138 18K
R1140 10K
R1139 2.2K
R1141 82K
Q1112 2SC3413
D1124 1SS270
R1241 3.9K
D1125 1SS270
R1133 18K
R1137 3.3K
R1135 10K
R1134 2.2K
R1136 82K
Q1113 2SC3413
R1240 3.9K
R1213 100
R1131 22K
R1132 22K
ZD1111 HZS5C1
ZD1112 HZS5C1
D1108 1SS270
D1109 1SS270
D1110 1SS270
D1112 1SS270
R390 100
YA



- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100kΩ/V).
  Voltage taken on a complex color bar signal including a standard color bar signal.

- 因爲本圖是基本線路圖，爲改進性能，各元件的數值將有變動。
- 上述所有直流電壓値由測試儀(內組100KΩ/V)測得。
- 復合色帶信號的電壓包括了標準色帶信號電壓。

IC001

Pin No.	1	2	3	4	5	6	7	8	9
PAL	0	12.1	0	4.3	0	0	11.9	11.9	12.1
SECAM	0	12.1	0	4.3	0	0	11.9	11.9	12.1
NTSC	0	12.1	0	4.3	0	0	11.9	11.9	12.1

IC201

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
PAL	4.7	5.8	7.4	4.0	4.6	4.6	0	3.7	9.6	4.0	3.4	3.4	7.4	5.6	8.7	8.6	3.9	5.0	3.9	4.6	4.6	7.6	5.1	2.2
SECAM	4.7	5.8	7.4	4.0	4.6	4.6	0	3.7	9.6	6.6	3.4	3.4	7.4	5.6	8.7	8.6	3.9	5.0	3.9	4.6	4.6	7.6	5.1	2.2
NTSC	4.7	5.8	7.4	4.0	4.6	4.6	0	3.7	9.6	3.8	3.4	3.4	7.4	6.0	8.7	8.6	3.9	5.0	3.9	4.6	4.6	7.6	5.1	2.2

IC281

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12
PAL	0	0	0	0	6.1	0	6.1	5.4	9.5	6.1	5.4	6.1
SECAM	0	0	0	0	6.1	0	6.1	5.4	9.5	6.1	5.4	6.1
NTSC	0	6.8	0	6.8	6.1	0	6.1	5.4	9.5	6.1	5.4	6.1

IC301

Pin No.	1	2	3	4	5	6	7	8
PAL	5.4	12.0	5.8	0	0	0	5.4	0
SECAM	5.4	12.0	5.8	0	0	0	5.4	0
NTSC	5.4	12.0	5.8	0	0	9.0	5.4	0

IC502

Pin No.	1	2	3	4	5	6	7	8
PAL	12	7.9	0	7.1	0	0	7.8	0
SECAM	12	7.9	0	7.2	0	0	7.8	0
NTSC	12	7.9	4.5	7.2	0	0	7.8	0

IC601

Pin No.	1	2	3	4	5	6	7	8
PAL	0	13.9	27.5	0.9	0.9	27.6	2.0	0.3
SECAM	0	13.9	27.5	0.9	0.9	27.6	2.0	0.3
NTSC	0	14.5	27.5	0.9	0.9	27.6	2.0	0.3

IC651

Pin No.	1	2	3	4	5	6	7	8	9
PAL	0.9	5.0	3.4	12.3	0	12.0	11.1	1.2	12.3
SECAM	0.9	5.0	3.4	12.3	0	12.0	11.1	1.2	12.3
NTSC	0.9	5.0	3.4	12.3	0	12.0	11.1	1.2	12.3

IC1101

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PAL	5	0	0	3.0	4.4	4.4	4.4	8.7	4.5	4.9	4.6	0.1	0.1	0.1	0.5	0.8	5.3	0	0.4	11.3	5.0	5.0	0	5.3	5.3	0	0	5.4	5.4	2.4	2.6	0
SECAM	5	0	0	3.1	4.4	3.6	4.4	8.6	4.5	4.9	4.6	0.1	0.1	0.1	0.5	0.8	5.3	0	0.4	11.3	5.0	5.0	0	5.3	5.3	0	0	5.4	5.4	2.4	2.6	0
NTSC	5	4.7	0	3.4	4.4	3.8	4.4	8.6	4.5	4.9	4.6	0.1	0.1	0.1	0.5	0.8	5.3	0	0.4	11.3	5.0	5.0	5.2	5.3	5.3	0	0	5.4	5.4	2.4	2.6	0

Pin No.	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
PAL	1.2	0	1.2	0	5.3	0	0	0	0	5.0	5.4	5.4	4.2	4.2	4.2	4.2	0	5.4	0	5.4	0	0	5.4	5.4	5.3	5.1	0.3	0.8	0.3	5.9	0.9	5.3
SECAM	1.2	0	1.2	0	5.3	0	0	0	0	5.0	5.4	5.4	4.2	4.2	4.2	4.2	0	5.4	5.4	5.4	0	0	5.4	5.4	5.3	5.1	0.3	0.8	0.3	5.9	0.9	5.3
NTSC	1.2	0	1.2	0	5.3	0	0	0	0	5.0	5.4	5.4	4.2	4.2	4.2	4.2	0	5.4	5.4	5.4	0	0	5.4	5.4	5.2	5.1	0.3	0.8	0.3	5.9	0.9	5.3

IC1313

Pin No.	1	2	3	4	5	6	7	8
PAL	0	7.8	0	0	7.2	0	7.8	12.0
SECAM	0	7.8	0	0	7.2	0	7.8	12.0
NTSC	0	7.8	0	0	7.2	0	7.8	12.0

IC3002

Pin No.	1	2	3	4	5	6	7	8
PAL	5.5	5.5	5.5	0	5.5	5.5	5.5	10.9
SECAM	5.5	5.5	5.5	0	5.5	5.5	5.5	10.9
NTSC	5.5	5.5	5.5	0	5.5	5.5	5.5	10.9

IC3003

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PAL	5.4	5.6	5.4	5.7	0.9	5.4	5.4	5.0	5.3	5.7	9.5	5.3	5.3	5.6	5.3	5.6	0.9	4.9	5.6	5.6	5.4	0.3	5.4	0	5.4	4.4	4.4	3.7	0	3.5	4.0	9.6
SECAM	5.4	5.6	5.4	5.7	0.9	5.4	5.4	5.0	5.3	5.7	9.5	5.3	5.3	5.6	5.3	5.6	0.9	4.9	5.6	5.6	5.4	0.3	5.4	0	5.4	4.4	4.4	3.7	0	3.5	4.0	9.6
NTSC	5.4	5.6	5.4	5.7	0.9	5.4	5.4	5.0	5.3	5.7	9.5	9.3	5.3	5.6	5.3	5.6	0.9	4.9	5.6	5.6	5.4	0.3	5.4	0	5.4	4.4	4.4	3.7	0	3.5	4.0	9.6

Pin No.	33	34	35	36
PAL	4.0	5.7	5.4	5.6
SECAM	4.0	5.7	5.4	5.6
NTSC	4.0	5.7	5.4	5.6

IC3201

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
PAL	9.0	9.3	3.8	4.9	6.5	4.8	5.9	1.1	3.9	4.3	6.6	5.7	6.8	5.4	4.1	8.6	4.3	7.2	2.0	0.7	0	0.3	5.6	6.0	6.0	3.7	0	6.1	4.1	0
SECAM	9.0	9.3	3.8	4.9	6.5	4.8	5.9	1.1	3.9	4.3	6.6	5.7	6.8	5.4	4.1	8.6	4.3	7.2	2.0	0.7	0	0.3	5.6	6.0	6.0	3.7	0	6.1	4.1	0
NTSC	9.0	9.3	3.8	4.9	6.5	4.8	5.9	1.1	3.9	4.3	6.6	5.7	6.8	5.4	4.1	8.6	4.3	7.2	2.0	0.7	0	0.3	5.6	6.0	6.0	3.7	0	6.1	4.1	0

IC4501

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
PAL	4.6	4.6	4.6	4.6	4.6	4.6	4.6	1.9	4.6	4.5	5.5	0.2	1.7	1.6	10.3	9.3	0	0	5.3	5.3	5.4	5.3	0	0	4.6	6.3	1.9	5.0	0	0
SECAM	4.6	4.6	4.6	4.6	4.6	4.6	4.6	1.9	4.6	4.5	5.5	0.2	1.7	1.6	10.3	9.3	0	0	5.3	5.3	5.4	5.3	0	0	4.6	6.3	1.9	5.0	0	0
NTSC	4.6	4.6	4.6	4.6	4.6	4.6	4.6	1.9	4.6	4.5	5.5	0.2	1.7	1.6	0	9.3	0	5.4	5.3	5.3	5.4	5.3	0	0	4.6	6.3	1.9	5.0	5.0	0

IC4502

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
PAL	0	2.3	0	2.0	2.3	2.3	2.0	9.6	28.5	13.5	5.0	5.0	0	13.5	5.0	5.0	13.3
SECAM	0	2.3	0	2.0	2.3	2.3	2.0	9.6	28.5	13.5	5.0	5.0	0	13.5	5.0	5.0	13.3
NTSC	0	2.3	0	2.0	2.3	2.3	2.0	9.6	28.5	13.5	5.0	5.0	0	13.5	5.0	5.0	13.3

IC4503

Pin No.	1	2	3	4	5	6	7	8
PAL	0	4.6	4.6	0	0	4.6	4.6	9.2
SECAM	0	4.6	4.6	0	0	4.6	4.6	9.2
NTSC	0	4.6	4.6	0	0	4.6	4.6	9.2

IC4801

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PAL	4.9	4.9	4.9	4.9	4.9	5.0	0.9	0	1.4	0	4.8	4.9	4.9	4.8	4.7	9.8
SECAM	4.9	4.9	4.9	4.9	4.9	5.0	0.9	0	1.4	0	4.8	4.9	4.9	4.8	4.7	9.8
NTSC	4.9	4.9	4.9	4.9	4.9	5.0	0.9	0	1.4	0	4.8	4.9	4.9	4.8	4.7	9.8

IC7000

Pin No.	1	2	3	4	5	6	7	8	9	10
PAL	5.4	12	1.4	12	0	0	0	0	0	5.4
SECAM	5.4	12	1.4	12	0	0	0	0	1.5	1.5
NTSC	5.4	12	1.4	12	0	0	11.6	1.2	0	0

Q1									Q101									Q1101									Q1102								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
11.6	0	11.6	0	8.6	0	11.6	0	0	11.9	5.9	5.4	11.9	5.9	5.4	11.9	5.9	5.4	5.8	0.5	0	11.9	0.4	0	9.4	0.4	0	6.0	0	0	6.0	0	0	6.0	0	0

Q1103									Q1104									Q1105									Q1106								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
11.9	5.2	7.0	11.9	5.2	7.0	11.9	5.2	7.0	11.9	5.8	5.5	11.9	5.8	5.7	11.9	5.8	5.7	11.9	5.2	7.0	11.9	5.2	7.0	11.9	5.2	7.0	0.3	0.9	0	0.3	0.9	0	0.3	0.9	0

Q1107									Q1108									Q1110									Q1111								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
0.1	0.8	0	0.1	0.8	0	0.1	0.8	0	2.3	0.3	0	2.0	0.3	0	3.3	0.3	0	0	5.4	5.4	0	5.4	5.4	0	5.4	5.4	0.6	4.9	5.0	0.6	4.9	5.0	0.6	4.9	5.0

Q1112									Q1113									Q1115									Q1313								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
0.2	0.8	0	0.2	0.8	0	0.2	0.8	0	0.2	0.8	0	0.2	0.8	0	0.2	0.8	0	0	0.4	0	0	0.4	0	6.7	0.4	0	12.1	4.0	3.4	12.1	3.7	3.1	12.1	4.0	3.4

Q1314									Q1302									Q201									Q251								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
0	5.0	5.7	0	4.8	5.4	0	5.1	5.7	3.7	12.0	3.0	3.7	12.0	3.0	3.7	12.0	3.0	5.4	9.5	4.8	5.4	9.5	4.8	5.4	9.5	4.8	0.9	6.4	0.3	0.9	6.4	0.3	0.9	6.4	0.3

Q252									Q253									Q254									Q255								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
4.1	0.2	0	4.1	0.2	0	0.1	4.9	0	0	4.8	0	0	4.8	0	6.5	0.2	0	1.2	4.6	0.5	1.2	4.6	0.5	1.2	4.6	0.5	0	9.6	0	0	9.6	0	0	0	0

Q281									Q299									Q1301									Q3013								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
4.6	9.6	3.9	4.6	9.6	3.9	4.6	9.6	3.9	0.1	9.6	0	0.1	9.6	0	0.1	9.6	0	3.7	12.0	3.1	3.7	12.0	3.1	3.7	12.0	3.1	3.6	0	3.0	3.6	12.1	3.0	3.6	0	3.0

Q3014									Q3015									Q3006									Q3007								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
3.9	12.2	3.3	3.9	12.2	3.3	3.9	12.2	3.3	4.0	12.2	3.3	4.0	12.2	3.3	4.0	12.0	3.3	0.7	0.1	0	0.7	0.1	0	0.7	0.1	0	0.7	0.2	0	0.7	0.2	0	0.7	0.2	0

Q3008									Q3018									Q3019									Q3020								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
0.7	0.1	0	0.7	0.1	0	0.7	0.1	0	0.2	12.1	0.4	0.2	12.1	0.4	0.2	12.1	0.4	0.2	12.2	0.4	0.2	12.2	0.4	0.2	12.2	0.4	0.1	12.2	0.4	0.1	12.2	0.4	0.1	12.2	0.4

Q311									Q2									Q3									Q314								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
10.0	2.9	2.2	10.0	2.9	2.2	10.0	2.9	2.2	12.1	0	0	0	0.7	0	12.1	0	0	0	9.4	0	0	0	0	9.4	0	9.5	12.1	5.1	4.5	12.1	5.1	4.5	12.1	5.3	4.8

Q315									Q316									Q317								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
0	4.5	5.1	0	4.5	5.1	0	4.8	5.3	0	4.5	5.2	0	0	5.1	0	4.7	5.3	0	4.5	5.1	0	4.5	5.1	0	4.8	5.4

Q3202									Q3203									Q3204								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
11.8	2.0	1.4	11.8	2.0	1.4	11.8	2.0	1.4	9.0	6.6	5.9	9.0	6.6	5.9	9.0	6.6	5.9	9.0	6.0	5.3	9.0	6.0	5.3	9.0	5.9	5.2

Q3209									Q303									Q321								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
4.1	0.5	0	4.1	0.5	0	4.1	0.5	0	10.9	12.0	10.1	10.9	12.0	10.1	10.9	12.0	10.1	0	12.2	12.0	0	12.2	12.0	0	12.2	[illegible]

Q304									Q3331									Q3051								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
8.6	12.0	7.9	8.6	12.0	7.9	8.6	12.0	7.9	4.2	12.1	3.6	4.2	12.1	3.6	4.2	12.1	3.6	5.4	10.9	4.8	5.4	10.9	4.8	5.4	10.9	[illegible]

Q3053									Q3054									Q381								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
5.4	10.9	4.8	5.4	10.9	4.8	5.4	10.9	4.8	5.5	10.9	4.9	5.5	10.9	4.9	5.5	10.9	4.9	10.1	11.9	9.3	10.1	11.9	9.3	10.0	11.9	[illegible]

Q401									Q402									Q403								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
17.6	9.6	6.9	7.6	9.6	6.9	7.6	9.6	6.9	0	4.6	0	0	4.6	0	0	0	6.7	4.5	0	0	4.5	0	0	0	9.5	0

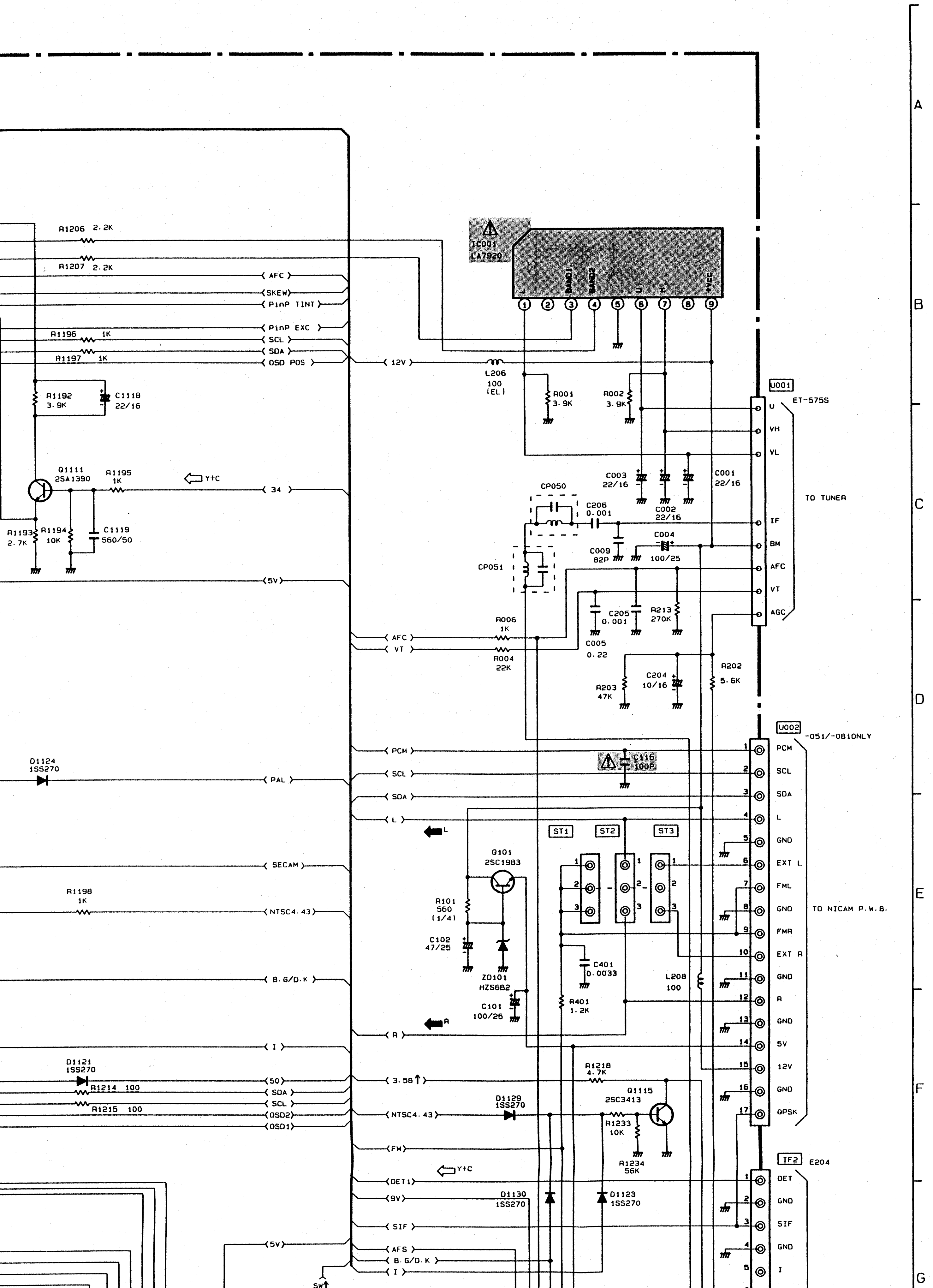
Q4502									Q4503									Q471								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
5.1	0.4	0	5.1	0.3	0	5.1	0.3	0	5.1	0	0	5.1	0	0	5.1	0	0	7.6	9.6	6.9	7.6	9.6	6.9	7.6	9.6	[illegible]

Q473									Q481									Q482								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
6.3	7.8	0	6.3	7.8	0	6.3	7.8	0	3.2	9.2	2.5	3.2	9.2	2.5	3.2	9.2	2.5	4.2	9.6	3.9	4.2	9.6	3.9	4.2	9.6	[illegible]

Q5002									Q5003									Q5004								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
2.4	12.1	1.8	2.4	12.1	1.8	2.4	12.1	1.8	3.7	6.2	3.0	3.7	6.2	3.0	3.7	6.2	3.0	3.0	6.3	2.4	3.0	6.3	2.4	3.0	6.3	[illegible]

Q5006									Q5007									Q5008								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
3.2	7.2	2.6	3.2	7.2	2.6	3.2	7.2	2.6	7.2	5.3	7.9	7.2	5.3	7.9	7.2	5.3	7.9	2.4	3.3	1.8	2.4	3.3	1.8	2.4	3.3	[illegible]

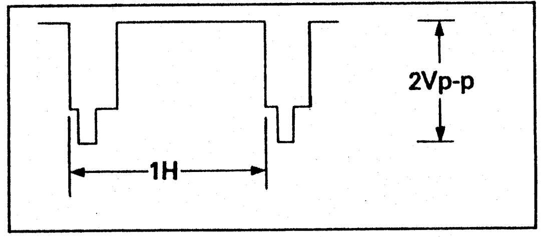
PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



A
B
C
D
E
F
G
IC001
LA7920
BAND1
BAND2
+Vcc
R1206 2.2K
R1207 2.2K
AFC
SKEW
PinP TINT
PinP EXC
SCL
SDA
OSD POS
R1196 1K
R1197 1K
12V
L206 100 (EL)
R001 3.9K
R002 3.9K
R1192 3.9K
C1118 22/16
U001
ET-575S
U
VH
VL
IF
BM
AFC
VT
AGC
TO TUNER
Q1111 2SA1390
R1195 1K
Y+C
34
C003 22/16
C001 22/16
CP050
C206 0.001
C002 22/16
R1193 2.7K
R1194 10K
C1119 560/50
C009 82P
C004 100/25
CP051
5V
C205 0.001
R213 270K
R006 1K
AFC
VT
R004 22K
C005 0.22
C204 10/16
R202 5.6K
R203 47K
U002
-051/-081ONLY
PCM
SCL
SDA
L
GND
EXT L
FML
GND
FMR
EXT R
GND
R
GND
5V
12V
GND
OPSK
TO NICAM P.W.B.
D1124 1SS270
PAL
C115 100P
ST1
ST2
ST3
Q101 2SC1983
SECAM
R1198 1K
NTSC4.43
R101 560 (1/4)
C102 47/25
ZD101 HZS6B2
C401 0.0033
L208 100
B.G/D.K
C101 100/25
R401 1.2K
R
I
D1121 1SS270
R1214 100
R1215 100
50
SDA
SCL
OSD2
OSD1
3.58
R1218 4.7K
Q1115 2SC3413
D1129 1SS270
NTSC4.43
R1233 10K
R1234 56K
FM
IF2
E204
DET1
DET
9V
D1130 1SS270
D1123 1SS270
GND
SIF
AFS
B.G/D.K
I
SW

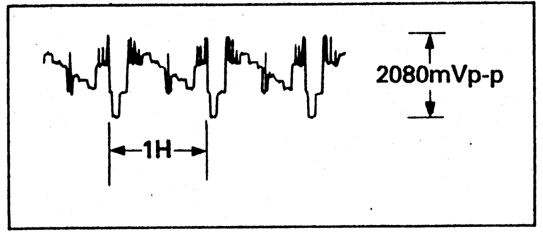
WAVEFORMS AT EACH SECTION

③ Q1302 Base



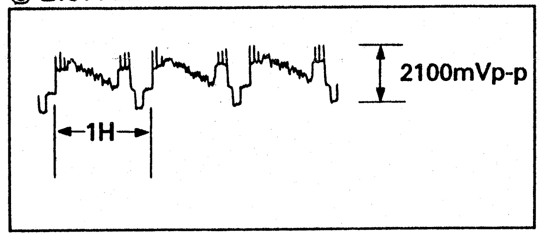
(10 μ sec)

④ Q3204 Emitter



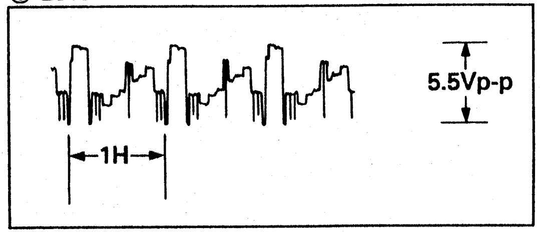
(10 μ sec)

⑤ Q1314 Emitter



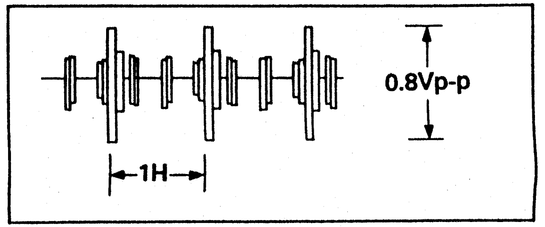
(10 μ sec)

⑥ Q313 Base



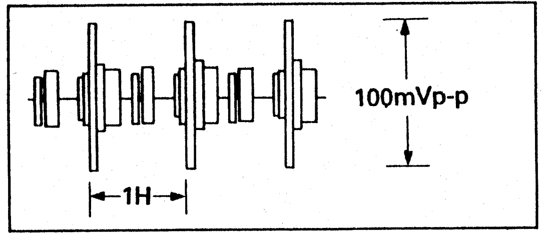
(10 μ sec)

⑦ IC501 ㉙ pin



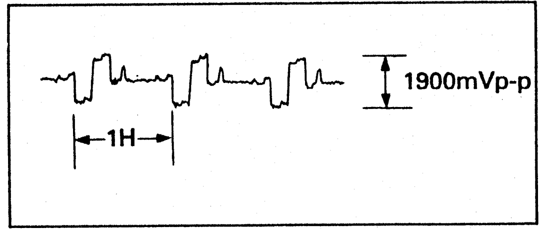
(10 μ sec)

⑧ IC501 ㉖ pin



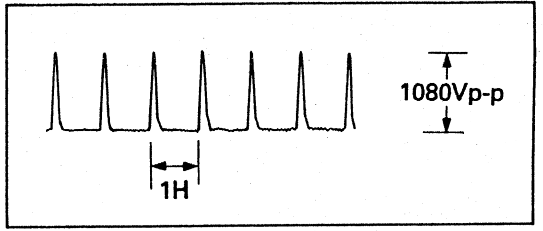
(10 μ sec)

⑨ R-Y



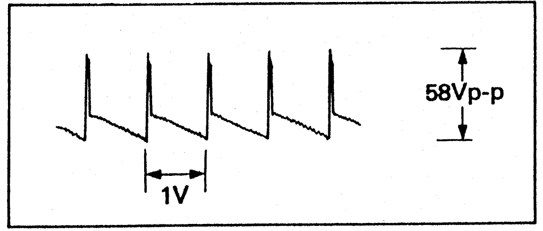
(10 μ sec)

⑩ H. DY M1



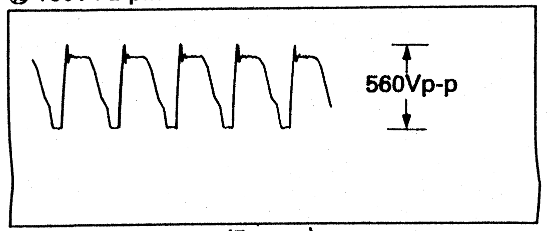
(20 μ sec)

⑪ IC601 ② pin

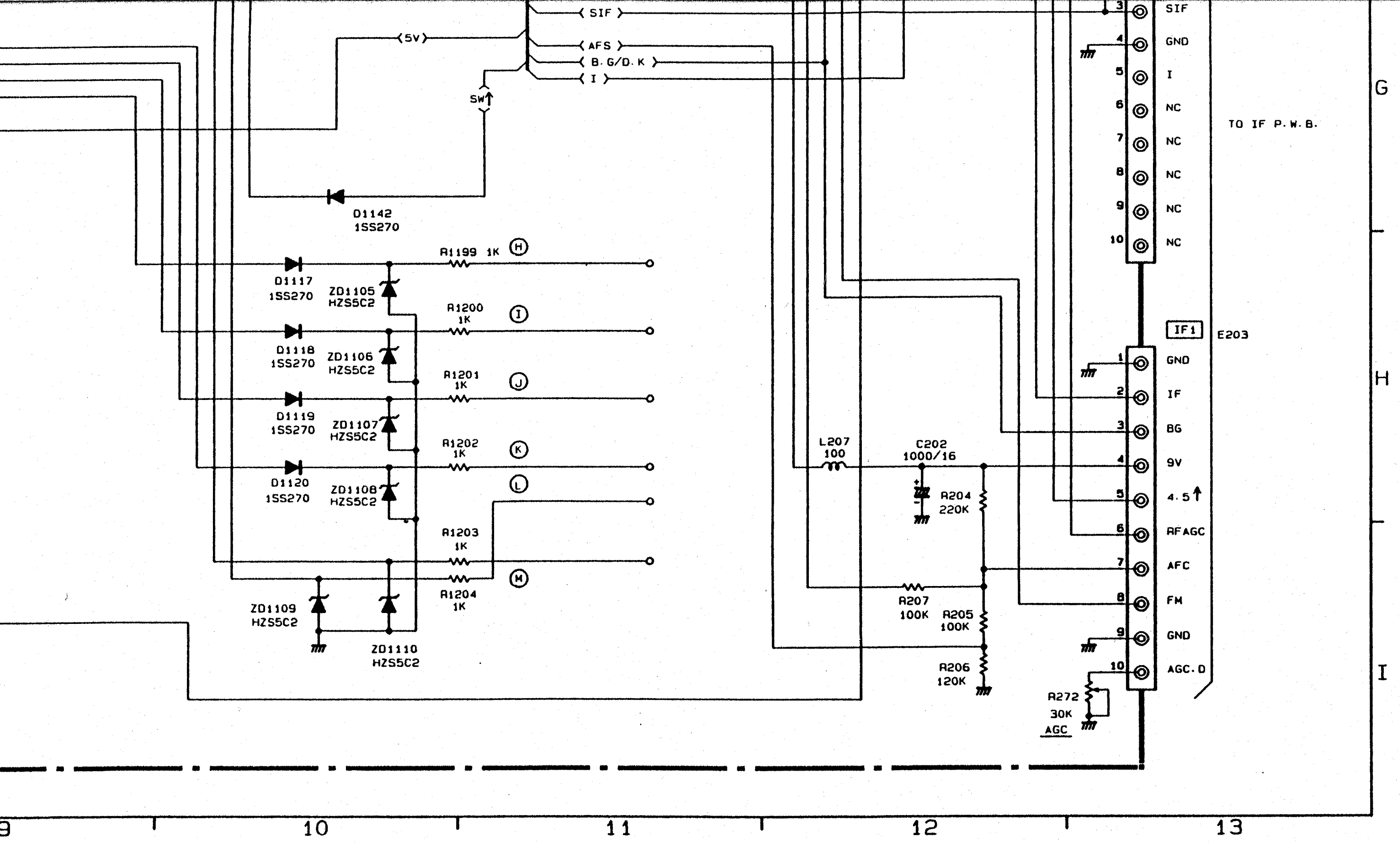


(5msec)

⑫ T901 P2 pin



(5 μ sec)


SIF
AFS
B.G/D.K
I
(5V)
SW
D1142
1SS270
R1199 1K
H
D1117
1SS270
ZD1105
HZS5C2
R1200
1K
I
D1118
1SS270
ZD1106
HZS5C2
R1201
1K
J
D1119
1SS270
ZD1107
HZS5C2
R1202
1K
K
D1120
1SS270
ZD1108
HZS5C2
L
R1203
1K
M
R1204
1K
ZD1109
HZS5C2
ZD1110
HZS5C2
L207
100
C202
1000/16
R204
220K
R207
100K
R205
100K
R206
120K
R272
30K
AGC
3 SIF
4 GND
5 I
6 NC
7 NC
8 NC
9 NC
10 NC
TO IF P.W.B.
IF1
E203
1 GND
2 IF
3 BG
4 9V
5 4.5
6 RFAGC
7 AFC
8 FM
9 GND
10 AGC.D
G
H
I
9
10
11
12
13

變動。

					Q3201								
ECAM		NTSC			PAL			SECAM			NTSC		
C	E	B	C	E	B	C	E	B	C	E	B	C	E
4.5	5.1	0	4.8	5.4	11.6	10	9.4	11.4	10	9.4	11.5	10	9.4

					Q3205								
ECAM		NTSC			PAL			SECAM			NTSC		
C	E	B	C	E	B	C	E	B	C	E	B	C	E
6.0	5.3	9.0	5.9	5.2	0	5.7	6.3	0	5.7	6.3	0	5.5	6.2

					Q322								
ECAM		NTSC			PAL			SECAM			NTSC		
C	E	B	C	E	B	C	E	B	C	E	B	C	E
12.2	12.0	0	12.2	12.0	7.7	0	0	7.7	0	0	7.7	0	0

					Q3052								
ECAM		NTSC			PAL			SECAM			NTSC		
C	E	B	C	E	B	C	E	B	C	E	B	C	E
10.9	4.8	5.4	10.9	4.8	5.4	10.9	4.8	5.4	10.9	4.8	5.4	10.9	4.8

					Q313								
ECAM		NTSC			PAL			SECAM			NTSC		
C	E	B	C	E	B	C	E	B	C	E	B	C	E
11.9	9.3	10.0	11.9	9.3	5.1	0	5.7	5.1	0	5.7	5.1	0	5.6

					Q4501								
ECAM		NTSC			PAL			SECAM			NTSC		
C	E	B	C	E	B	C	E	B	C	E	B	C	E
0	0	0	9.5	0	9.2	9.2	8.7	9.2	9.2	8.7	9.2	9.2	8.7

					Q472								
ECAM		NTSC			PAL			SECAM			NTSC		
C	E	B	C	E	B	C	E	B	C	E	B	C	E
9.6	6.9	7.6	9.6	6.9	0.1	9.5	0	0.1	9.5	0	0.1	9.5	0

					Q5001								
ECAM		NTSC			PAL			SECAM			NTSC		
C	E	B	C	E	B	C	E	B	C	E	B	C	E
9.6	3.9	4.2	9.6	3.9	3.1	12.0	2.4	3.1	12.0	2.4	3.1	12.0	2.4

					Q5006								
ECAM		NTSC			PAL			SECAM			NTSC		
C	E	B	C	E	B	C	E	B	C	E	B	C	E
6.3	2.4	3.0	6.3	2.4	2.4	5.6	1.8	2.4	5.6	1.8	2.4	5.6	1.8

					Q5009								
ECAM		NTSC			PAL			SECAM			NTSC		
C	E	B	C	E	B	C	E	B	C	E	B	C	E
3.3	1.8	2.4	3.3	1.8	3.1	7.9	2.5	3.1	7.9	2.5	3.1	7.9	2.5

Q501									Q510									Q504									Q506								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
0	5.2	0	0	5.2	0	0	5.2	0	0.7	0	0	0.7	0	0	0.7	0	0	9.5	0	0	9.2	0	0	0	0	0	12.1	3.8	11.6	12.1	2.0	1.4	12.1	3.8	11.6

Q5010									Q5012									Q5013									Q508								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
0	0.1	0	0	8.2	0	0.7	0.1	0	0	11.7	0	0.7	0	0	0	11.7	0	4.5	4.1	4.0	0.7	9.1	3.4	4.5	4.1	4.0	1.9	3.4	1.2	1.9	3.5	1.2	1.9	3.4	1.2

Q509									Q601									Q6010									Q651								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
0.9	6.4	0.4	1.0	6.7	0.4	0.9	6.8	0.4	0	0.1	0	0	12.6	0	0	7.1	0	0	7.1	0	10	0	0	0	7.1	0	0.7	11.3	0	0.7	11.3	0	0.7	11.3	0

Q652									Q7000									Q7001									Q701								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
11.3	1.3	0.7	11.3	1.3	0.7	11.3	1.3	0.7	12	0.3	0	12	10.9	10.0	12	0.3	0	0.3	0	0	0.3	0	0	0.3	0	0	12.3	1.0	2.0	12.3	1.0	2.0	12.3	1.0	2.0

Q7011									Q7012									Q704									Q7060								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
7.1	0	0	0	9.5	0	7.1	0	0	0.1	7.1	0	12.6	0	0	0.1	7.1	0	0.4	3.0	7.0	0.4	30.8	0	0.4	30.1	0	0.3	0	0	0.3	0	0	9.8	0	0

Q7051									Q707									Q708									Q709								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
12.1	0.3	0	12.1	9.8	9.2	12.1	0.3	0	0	12.2	8.6	0	12.2	8.6	0	12.2	8.6	111.4	9.0	111.6	111.3	9.0	111.6	111.4	8.9	111.6	12.3	2.4	3.6	12.3	2.1	3.6	12.3	3.2	3.6

Q710									Q705									Q7801									Q7902								
PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC			PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
3.0	4.8	5.4	3.0	4.8	5.4	3.0	4.8	5.4	0	112.0	0	0	112.0	0	0	112.0	0	12.2	0	0	0	0	0	12.2	0	0	0	8.0	0	0	8.0	0	0	8.0	0

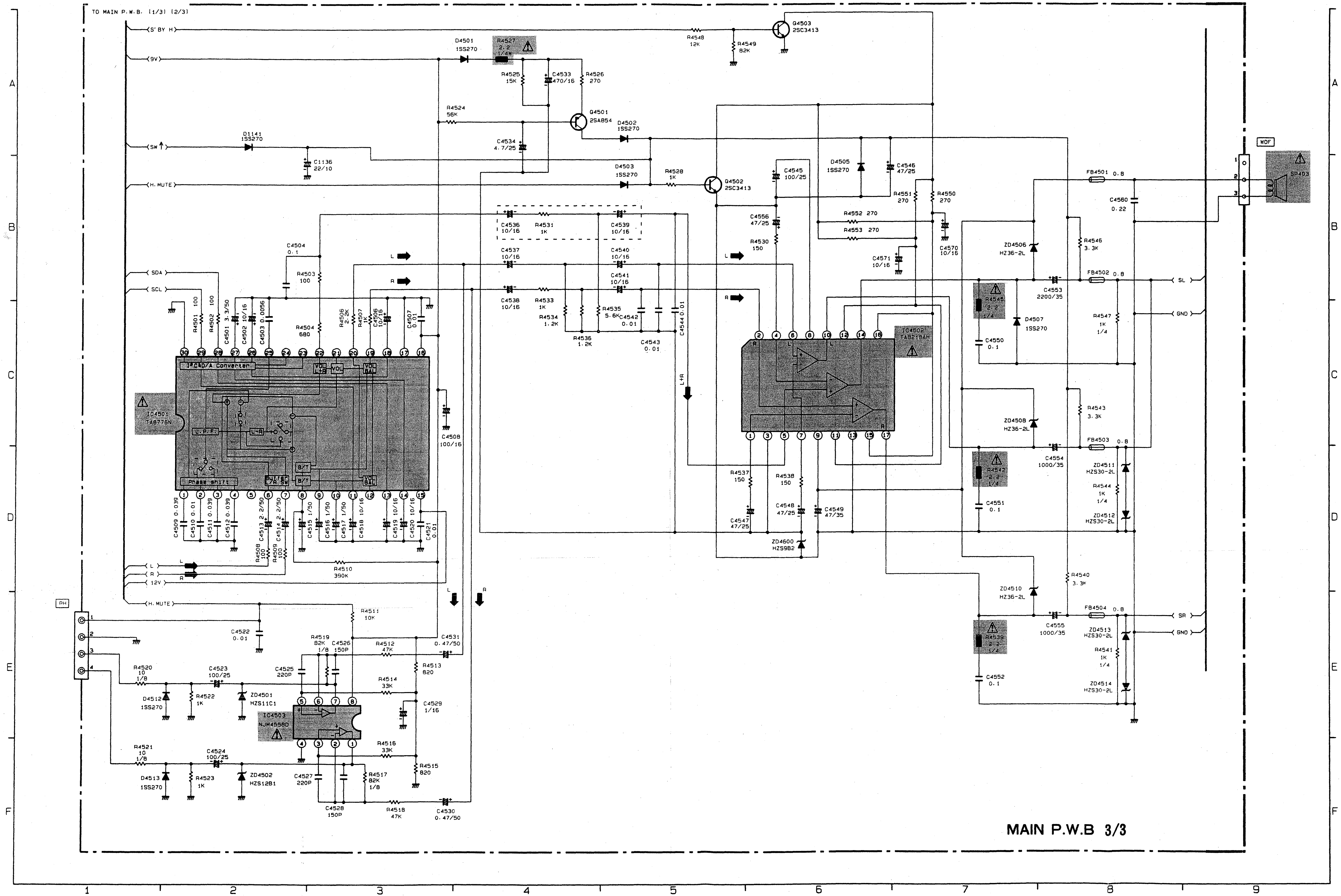
Q795								
PAL			SECAM			NTSC		
B	C	E	B	C	E	B	C	E
12.2	10.5	9.9	12.2	10.5	9.9	12.2	10.5	9.9

基本線路圖／ BASIC CIRCUIT DIAGRAM

製作安全上的注意: 附帶有 ⚠ 記號的組件具有出於安全方面考慮的特殊性能。因此在更換這些組件時，請詳細閱讀這本檢修手册上“製品安全上的注意”一節。請小心，切勿因檢修不當而降低機器的安全性能。

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

CMT2988


TO MAIN P.W.B. (1/3) (2/3)
S' BY H
9V
SW
H. MUTE
SDA
SCL
L
R
12V
PH
D4501 1SS270
R4527 2.2 1/4W
R4525 15K
C4533 470/16
R4526 270
R4524 56K
Q4501 2SA854
D4502 1SS270
C4534 4.7/25
D1141 1SS270
C1136 22/10
D4503 1SS270
R4528 1K
Q4502 2SC3413
Q4503 2SC3413
R4548 12K
R4549 82K
C4536 10/16
R4531 1K
C4539 10/16
C4537 10/16
C4540 10/16
C4541 10/16
C4538 10/16
R4533 1K
R4534 1.2K
R4535 5.6K
C4542 0.01
R4536 1.2K
C4543 0.01
C4544 0.01
C4504 0.1
R4503 100
R4504 680
R4501 100
R4502 100
C4501 3.3/50
C4502 10/16
C4503 0.0056
R4506 2.2K
R4507 1K
C4506 10/16
C4507 0.01
IC4501 TA6775N
I²C D/A Converter
VOL
L.P.F.
L-R
Phase shift
B/T
VOL BAL
C4508 100/16
C4509 0.039
C4510 0.01
C4511 0.039
C4512 0.039
C4513 2.2/50
C4514 2.2/50
C4515 1/50
C4516 1/50
C4517 1/50
C4518 10/16
C4519 10/16
C4520 10/16
C4521 0.01
R4508 100
R4509 100
R4510 390K
R4511 10K
C4522 0.01
R4519 82K 1/8
C4526 150P
C4525 220P
R4512 47K
C4531 0.47/50
R4513 820
R4514 33K
C4529 1/16
R4520 10 1/8
C4523 100/25
D4512 1SS270
R4522 1K
ZD4501 HZS11C1
IC4503 NJM4558D
R4521 10 1/8
C4524 100/25
D4513 1SS270
R4523 1K
ZD4502 HZS12B1
C4527 220P
C4528 150P
R4517 82K 1/8
R4516 33K
R4515 820
R4518 47K
C4530 0.47/50
L+R
C4545 100/25
C4556 47/25
R4530 150
D4505 1SS270
C4546 47/25
R4551 270
R4550 270
R4552 270
R4553 270
C4571 10/16
C4570 10/16
IC4502 TA8218AH
R4537 150
R4538 150
C4547 47/25
C4548 47/25
C4549 47/35
ZD4600 HZS9B2
ZD4506 HZ36-2L
R4546 3.3K
R4545 2.2 1/4
C4553 2200/35
D4507 1SS270
C4550 0.1
FB4501 0.8
C4560 0.22
FB4502 0.8
R4547 1K 1/4
ZD4508 HZ36-2L
R4543 3.3K
R4542 2.2 1/4
C4554 1000/35
FB4503 0.8
ZD4511 HZS30-2L
R4544 1K 1/4
ZD4512 HZS30-2L
C4551 0.1
ZD4510 HZ36-2L
R4540 3.3K
R4539 2.2 1/4
C4555 1000/35
FB4504 0.8
ZD4513 HZS30-2L
R4541 1K 1/4
ZD4514 HZS30-2L
C4552 0.1
WOF
SP403
SL
GND
SR
GND
MAIN P.W.B 3/3
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9

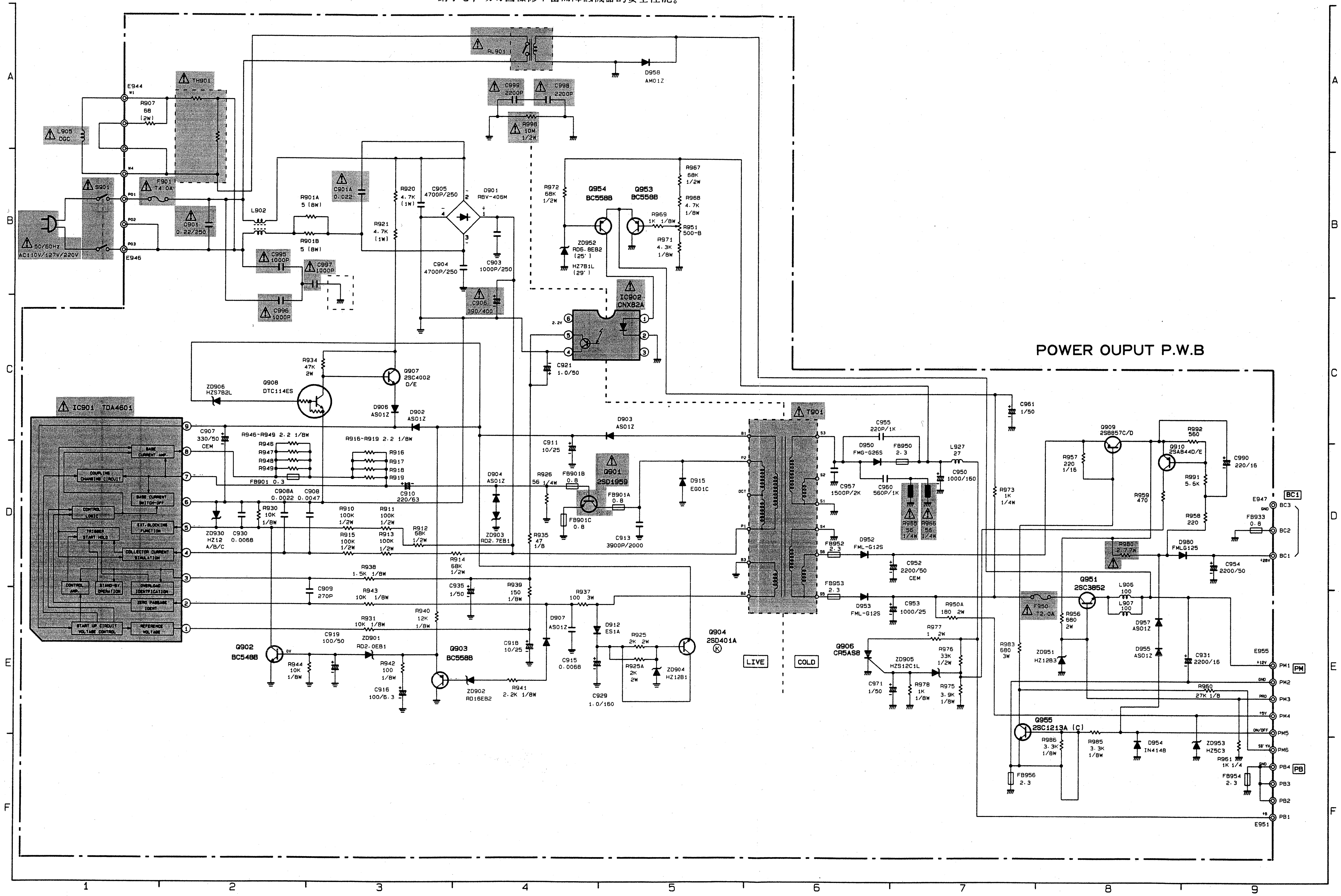
- 因爲本圖是基本線路圖，爲改進性能，各元件的數值將有變動。
- 上述所有直流電壓值由測試儀(內組100KΩ /V)測得。
- 復合色帶信號的電壓包括了標準色帶信號電壓。

- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100kΩ/V).
  Voltage taken on a complex color bar signal including a standard color bar signal.

基本線路圖／ BASIC CIRCUIT DIAGRAM

製作安全上的注意： 附帶有 ⚠ 記號的組件具有出於安全方面考慮的特殊性能。因此在更換這些組件時，請詳細閱讀這本檢修手册上“製品安全上的注意”一節。請小心，切勿因檢修不當而降低機器的安全性能。

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.


A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
POWER OUPUT P.W.B
RL901
D958
AM01Z
C999
2200P
C998
2200P
R998
10M
1/2W
TH901
E944
R907
68
(2W)
L905
DGC
S901
F901
T4.0A
C901
0.22/250
50/60Hz
AC110V/127V/220V
E946
L902
R901A
5 (8W)
R901B
5 (8W)
C995
1000P
C997
1000P
C996
1000P
C901A
0.022
R920
4.7K
(1W)
R921
4.7K
(1W)
C905
4700P/250
D901
RBV-406M
C904
4700P/250
C903
1000P/250
C906
390/400
R972
68K
1/2W
Q954
BC558B
Q953
BC558B
R967
68K
1/2W
R968
4.7K
1/8W
R969
1K 1/8W
R951
500-B
R971
4.3K
1/8W
ZD952
RD6.8EB2
(25')
HZ7B1L
(29')
IC902
CNX82A
2.2V
C921
1.0/50
R934
47K
2W
Q907
2SC4002
D/E
Q908
DTC114ES
ZD906
HZS7B2L
D906
AS01Z
D902
AS01Z
IC901 TDA4601
BASE CURRENT AMP.
COUPLING CHARGING CIRCUIT
BASE CURRENT SWITCH-OFF
CONTROL LOGIC
TRIGGER START.HOLD
EXT. BLOCKING FUNCTION
COLLECTOR CURRENT SIMULATION
CONTROL AMP.
STAND-BY OPERATION
OVERLOAD IDENTIFICATION
ZERO PASSAGE IDENT
START UP CIRCUIT VOLTAGE CONTROL
REFERENCE VOLTAGE
C907
330/50
CEM
R946-R949 2.2 1/8W
R946
R947
R948
R949
R916-R919 2.2 1/8W
R916
R917
R918
R919
FB901 0.3
C910
220/63
C908A
0.0022
C908
0.0047
ZD930
HZ12
A/B/C
C930
0.0068
R930
10K
1/8W
R910
100K
1/2W
R915
100K
1/2W
R911
100K
1/2W
R913
100K
1/2W
R912
68K
1/2W
R914
68K
1/2W
R938
1.5K 1/8W
C909
270P
R943
10K 1/8W
R940
12K
1/8W
R931
10K 1/8W
C919
100/50
ZD901
RD2.0EB1
Q902
BC548B
R944
10K
1/8W
R942
100
1/8W
C916
100/6.3
Q903
BC558B
ZD902
RD16EB2
R941
2.2K 1/8W
D903
AS01Z
C911
10/25
D904
AS01Z
ZD903
RD2.7EB1
R926
56 1/4W
FB901B
0.8
Q901
2SD1959
FB901A
0.8
FB901C
0.8
C913
3900P/2000
R935
47
1/8
C935
1/50
R939
150
1/8W
R937
100 3W
D907
AS01Z
C915
0.0068
D912
ES1A
R925
2K 2W
R925A
2K
2W
ZD904
HZ12B1
C918
10/25
C929
1.0/160
Q904
2SD401A
Ⓚ
D915
EG01C
T901
LIVE
COLD
C955
220P/1K
D950
FMG-G26S
FB950
2.3
L927
27
C957
1500P/2K
C960
560P/1K
C950
1000/160
R955
56
1/4W
R966
56
1/4W
FB952
2.3
D952
FML-G12S
C952
2200/50
CEM
FB953
2.3
D953
FML-G12S
C953
1000/25
R950A
180 2W
R977
1 2W
Q906
CR5AS8
ZD905
HZS12C1L
R976
33K
1/2W
C971
1/50
R978
1K
1/8W
R975
3.9K
1/8W
C961
1/50
R973
1K
1/4W
Q909
2SB857C/D
R957
220
1/16
R992
560
Q910
2SA844D/E
C990
220/16
R991
5.6K
R959
470
R958
220
R980
2.7K
D980
FMLG12S
C954
2200/50
F950
T2.0A
Q951
2SC3852
L906
100
L907
100
R956
680
2W
D957
AS01Z
D955
AS01Z
R983
680
3W
ZD951
HZ12B3
C931
2200/16
R960
27K 1/8
Q955
2SC1213A (C)
R986
3.3K
1/8W
R985
3.3K
1/8W
D954
IN4148
ZD953
HZ5C3
R961
1K 1/4
FB954
2.3
FB956
2.3
E947
BC1
FB933
0.8
BC3
BC2
BC1
E955
PM
PM1
PM2
PM3
PM4
PM5
PM6
PB
PB4
PB3
PB2
PB1
E951

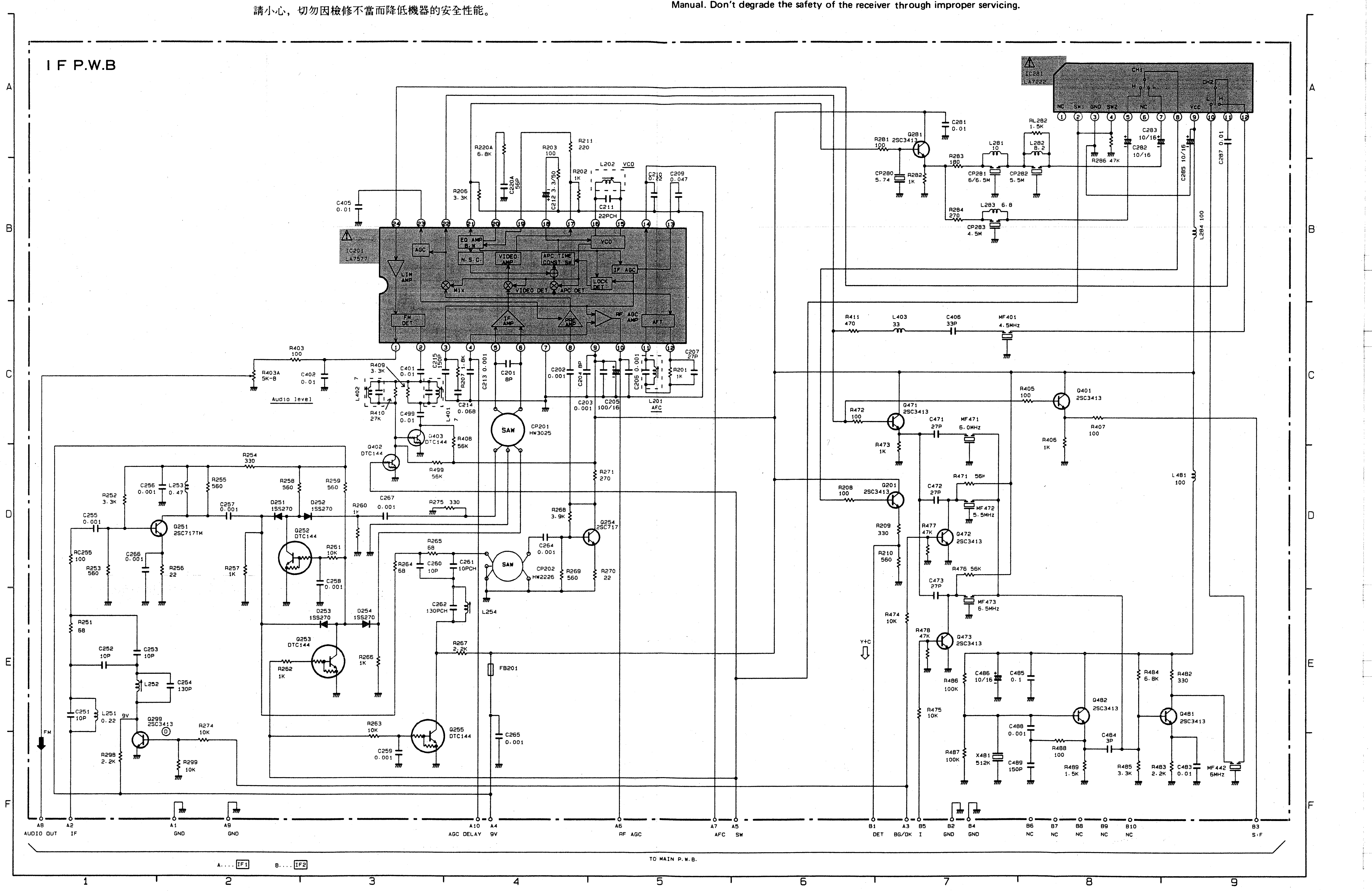
- 因爲本圖是基本線路圖，爲改進性能，各元件的數值將有變動。
- 上述所有直流電壓值由測試儀(內組100KΩ/V)測得。
- 復合色帶信號的電壓包括了標準色帶信號電壓。

- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100kΩ/V).
  Voltage taken on a complex color bar signal including a standard color bar signal.

基本線路圖／ BASIC CIRCUIT DIAGRAM

製作安全上的注意：附帶有 ⚠ 記號的組件具有出於安全方面考慮的特殊性能。因此在更換這些組件時，請詳細閱讀這本檢修手册上“製品安全上的注意”一節。請小心，切勿因檢修不當而降低機器的安全性能。

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.


I F P.W.B
IC201 LA7577
IC281 LA7222
AGC
LIM AMP
EQ AMP
N.S.C.
VIDEO AMP
APC TIME CONST SW
VCO
IF AGC
LOCK DET
MIX
VIDEO DET
APC DET
FM DET
IF AMP
PRE AMP
RF AGC AMP
AFT
SAW
CP201 HW3025
CP202 HW2226
Q251 2SC717TM
Q252 DTC144
Q253 DTC144
Q254 2SC717
Q255 DTC144
Q299 2SC3413
Q281 2SC3413
Q201 2SC3413
Q401 2SC3413
Q402 DTC144
Q403 DTC144
Q471 2SC3413
Q472 2SC3413
Q473 2SC3413
Q481 2SC3413
Q482 2SC3413
MF401 4.5MHz
MF471 6.0MHz
MF472 5.5MHz
MF473 6.5MHz
MF442 6MHz
X481 512K
FB201
Audio level
Y+C
FM
A8 AUDIO OUT
A2 IF
A1 GND
A9 GND
A10 AGC DELAY
A4 9V
A6 RF AGC
A7 AFC
A5 SW
B1 DET
A3 BG/DK
B5 I
B2 GND
B4 GND
B6 NC
B7 NC
B8 NC
B9 NC
B10 NC
B3 S-F
TO MAIN P.W.B.
A.... IF1
B.... IF2
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9

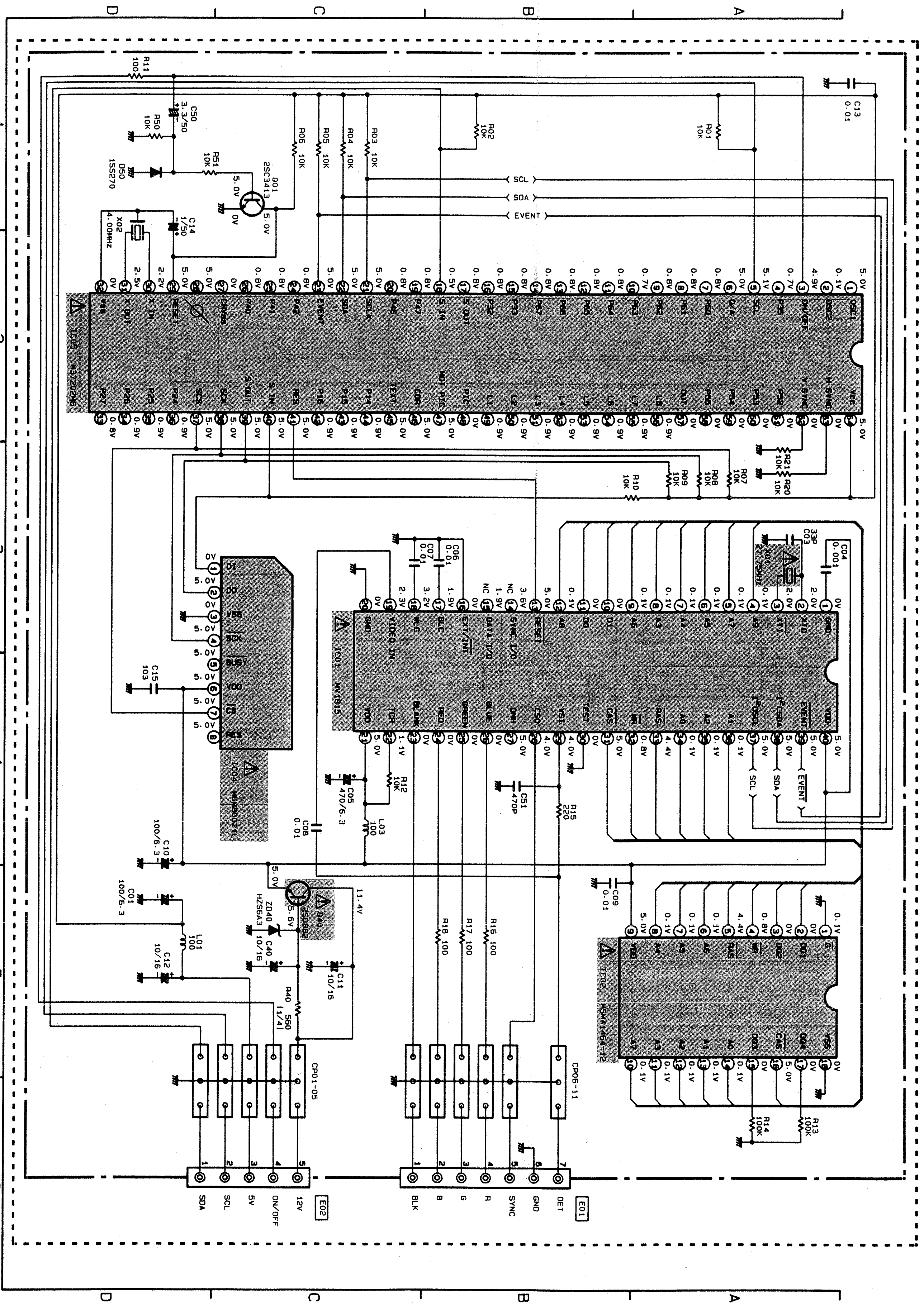
- 因爲本圖是基本線路圖，爲改進性能，各元件的數值將有變動。
- 上述所有直流電壓值由測試儀（內組100KΩ/V）測得。
- 復合色帶信號的電壓包括了標準色帶信號電壓。

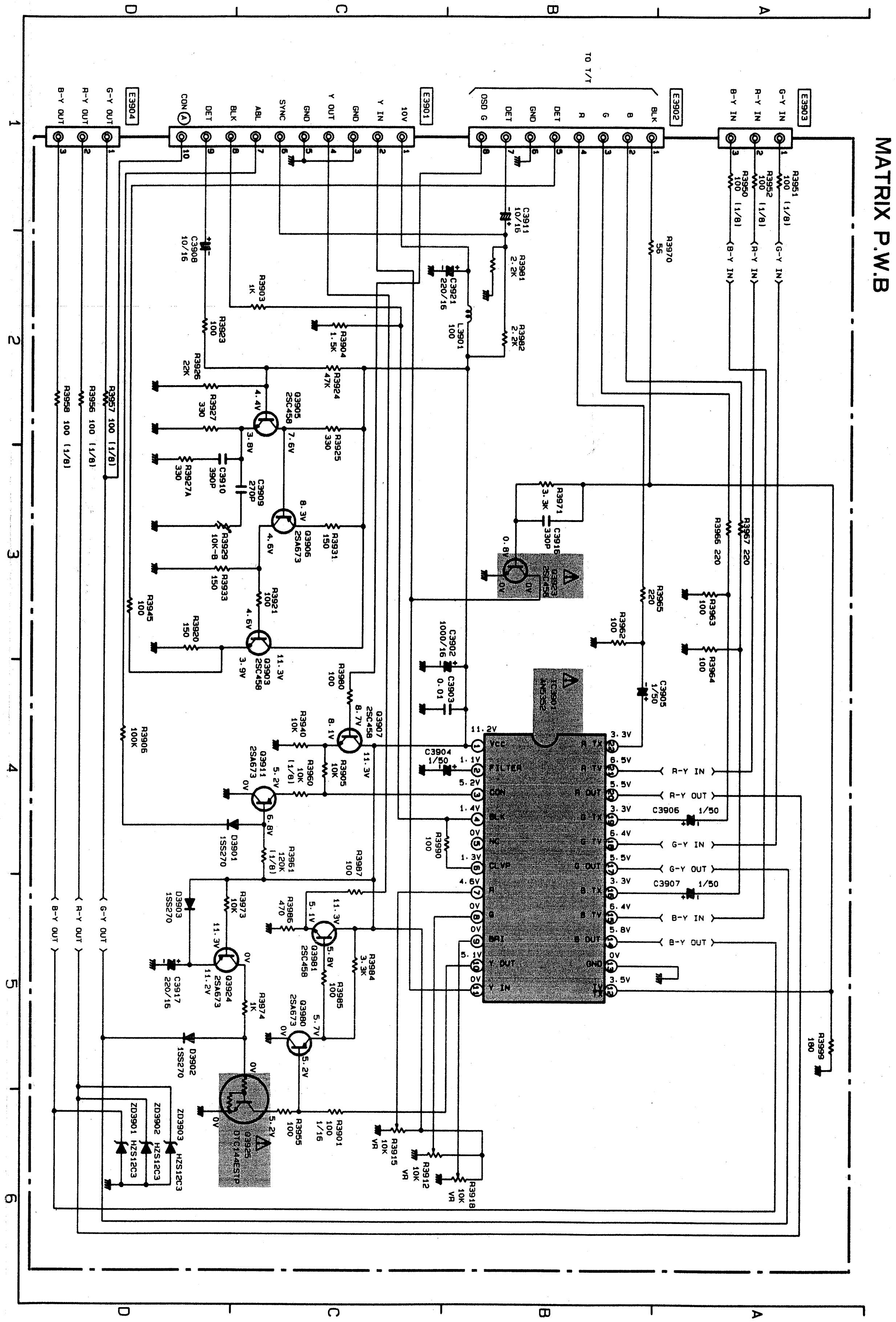
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100kΩ/V).
  Voltage taken on a complex color bar signal including a standard color bar signal.

基本線路圖／ BASIC CIRCUIT DIAGRAM

製作安全上的注意：附帶有⚠記號的組件具有出於安全方面考慮的特殊性能。因此在更換這些組件時，請詳細閱讀這本檢修手冊上“製品安全上的注意”一節。請小心，切勿因檢修不當而降低機器的安全性能。

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.


TELETEXT P.W.B
IC05 M37020
IC01
IC02
IC04
CP01-05
CP06-11
E02
E01
SDA
SCL
5V
ON/OFF
12V
BLK
B
G
R
SYNC
GND
DET


MATRIX P.W.B
E3904
E3901
E3902
E3903
B-Y OUT
R-Y OUT
G-Y OUT
B-Y IN
R-Y IN
G-Y IN
TO T/T

●因爲本圖是基本線路圖，爲改進性能，各元件的數值將有變動。

●上述所有直流電壓值由測試儀(內組100KΩ/V)測得。

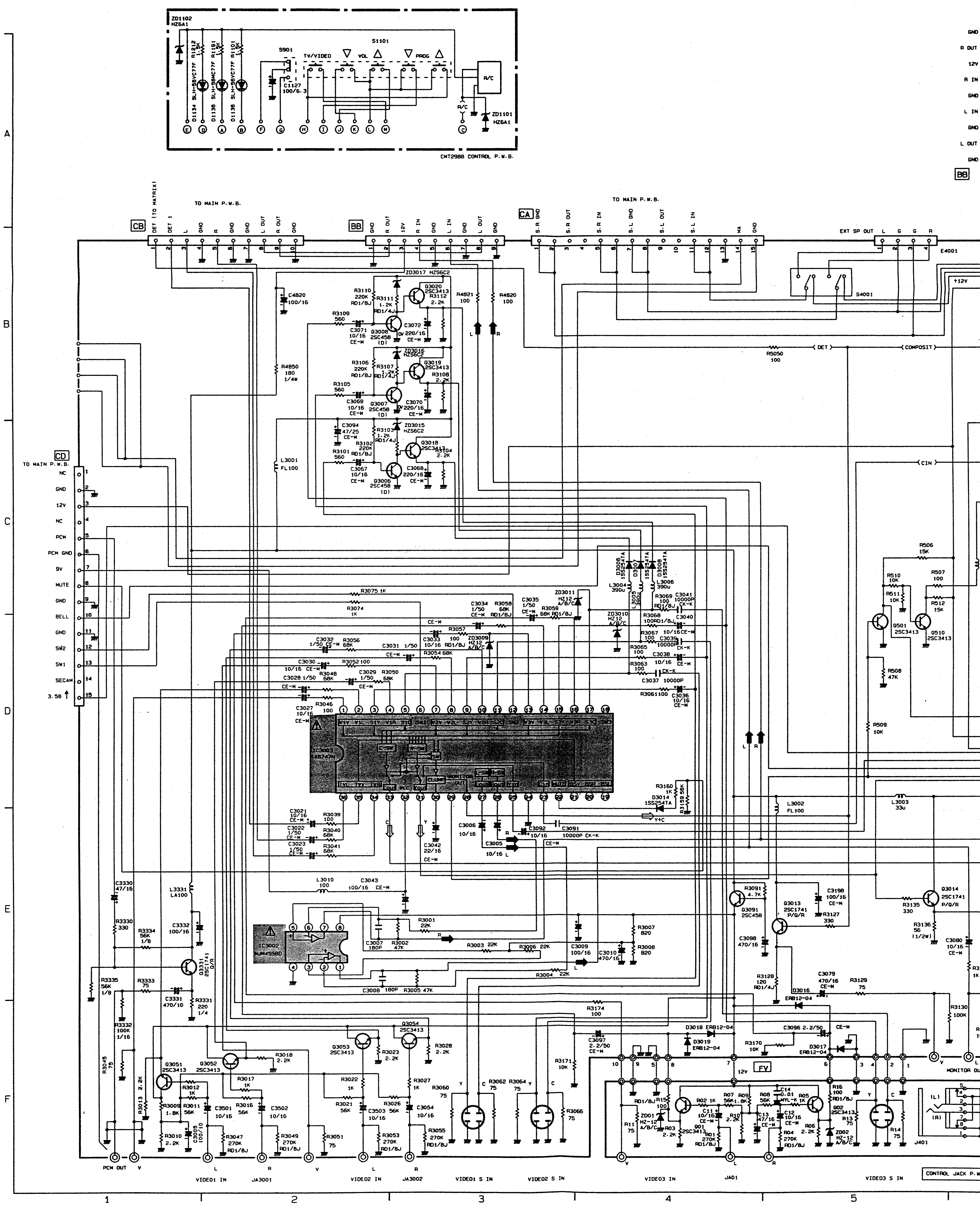
●復合色帶信號的電壓包括了標準色帶信號電壓。

●Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

●All DC voltage to be measured with a tester (100kΩ/V).
Voltage taken on a complex color bar signal including a standard color bar signal.

基本線路圖／ BASIC CIRCUIT DIAGRAM

製作安全上的注意： 附帶有 ⚠ 記號的組件具有出於安全方面考慮的特殊性能。因此在更換這些組件時，請詳細閱讀這本檢修手册上“製品安全上的注意”一節。請小心，切勿因檢修不當而降低機器的安全性能。


CMT2988 CONTROL P.W.B.
S901
S1101
TV/VIDEO
VOL
PROG
R/C
ZD1102 HZ6A1
ZD1101 HZ6A1
C1127 100/6.3
D1134 SLH-56VC77F
D1135 SLH-56MC77F
D1136 SLH-56VC77F
R1212 1.5K
R1191 1.5K
R1101 1.5K
TO MAIN P.W.B.
CB
DET (TO MATRIX)
DET 1
L
GND
R
L OUT
R OUT
BB
12V
R IN
L IN
CA
S.R GND
S.R OUT
S.R IN
S.L GND
S.L OUT
S.L IN
MA
EXT SP OUT
E4001
S4001
+12V
CD
NC
PCM
PCM GND
9V
MUTE
BELL
SW2
SW1
SECAM
3.58
R5050 100
DET
COMPOSIT
CIN
IC3003 LA7947N
IC3002 NJM4558D
ZD3017 HZS6C2
ZD3016 HZS6C2
ZD3015 HZS6C2
Q3020 2SC3413
Q3019 2SC3413
Q3018 2SC3413
Q3008 2SC458 (D)
Q3007 2SC458 (D)
Q3006 2SC458 (D)
R4821 100
R4820 100
R4850 180 1/4W
C4820 100/16
L3001 FL100
L3002 FL100
L3003 33u
L3004 390u
L3005 390u
L3006 390u
L3010 100
L3331 LA100
ZD3011 HZ12 A/B/C
ZD3010 HZ12 A/B/C
ZD3009 HZ12 A/B/C
D3005 1SS254TA
D3007 1SS254TA
D3008 1SS254TA
D3014 1SS254TA
Y+C
Q3051 2SC3413
Q3052 2SC3413
Q3053 2SC3413
Q3054 2SC3413
Q3331 2SC1741 Q/R
Q3091 2SC458
Q3013 2SC1741 P/Q/R
Q3014 2SC1741 P/Q/R
Q501 2SC3413
Q510 2SC3413
Q01 2SC3413
Q02 2SC3413
D3016 ERB12-04
D3017 ERB12-04
D3018 ERB12-04
D3019 ERB12-04
ZD01 HZ-12 A/B/C
ZD02 HZ-12 A/B/C
FV
12V
MONITOR OUT
J401
PCM OUT
VIDEO1 IN
JA3001
VIDEO2 IN
JA3002
VIDEO1 S IN
VIDEO2 S IN
VIDEO3 IN
JA01
VIDEO3 S IN
CONTROL JACK P.W
A
B
C
D
E
F
1
2
3
4
5

● 因爲本圖是基本線路圖，爲改進性能，各元件的數值將有變動。

● 上述所有直流電壓値由測試儀(內組100KΩ/V)測得。

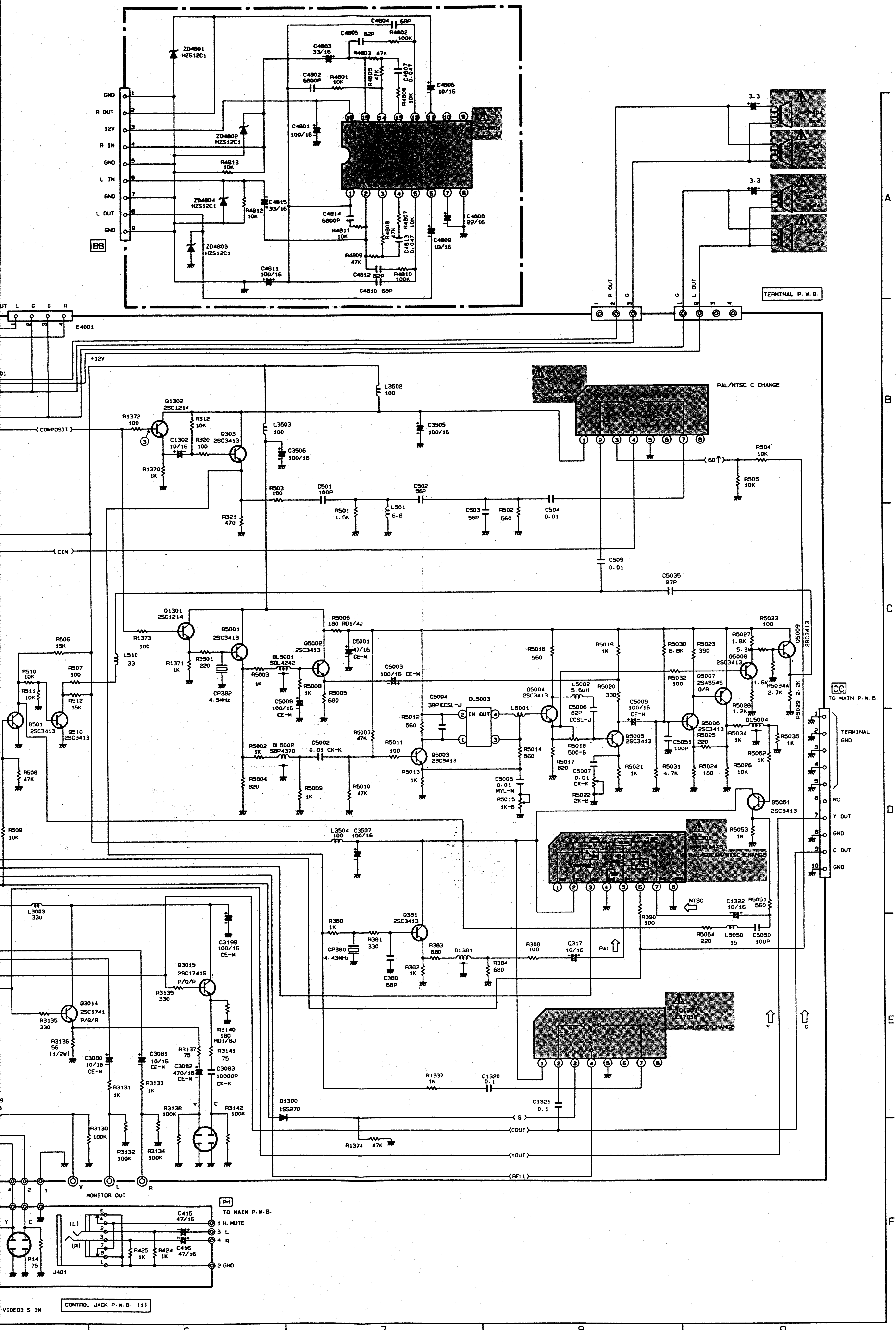
● 復合色帶信號的電壓包括了標準色帶信號電壓。

● Since this

● All DC vo
Voltage ta

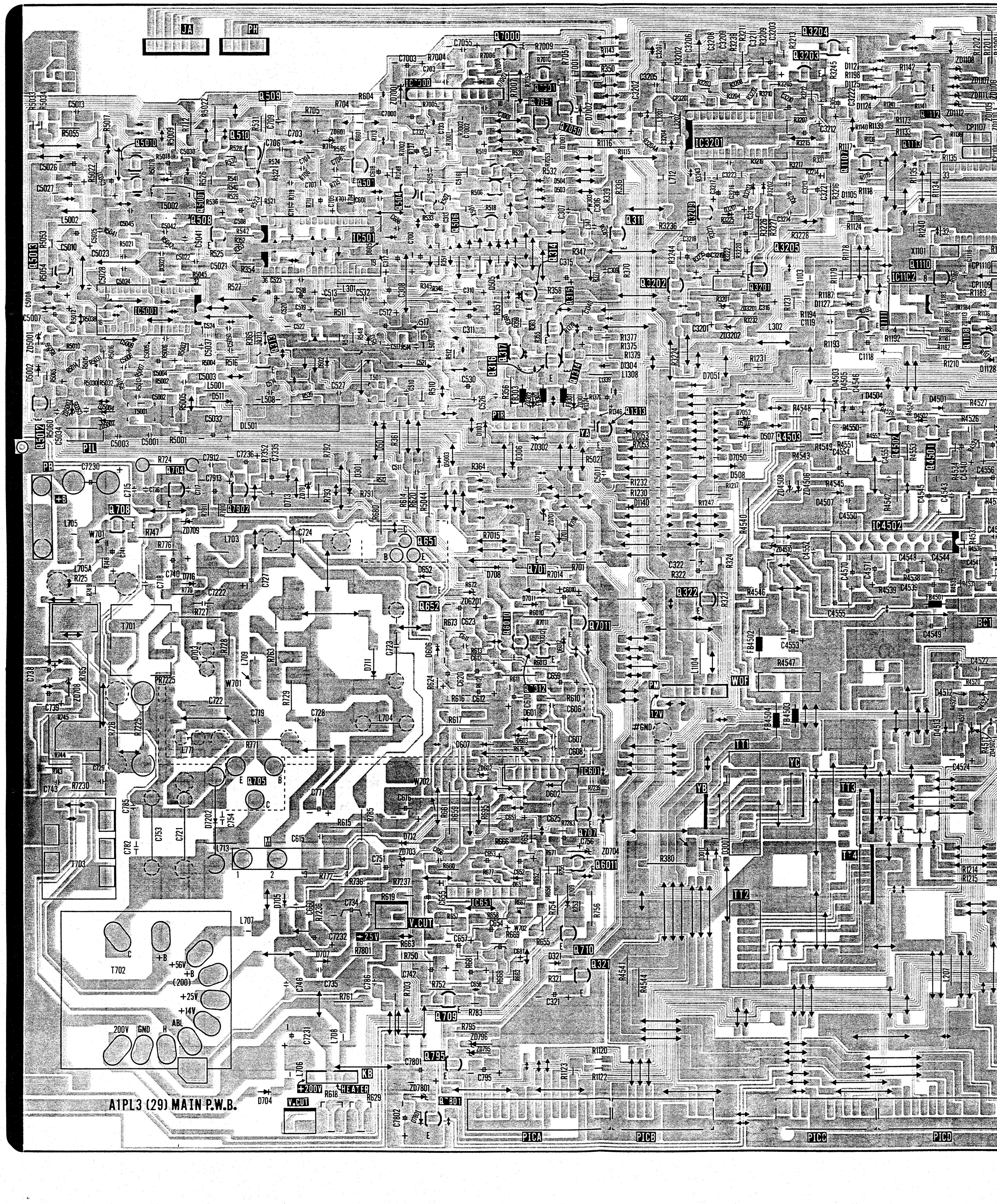
慮的特殊性能。
上的注意”一節。

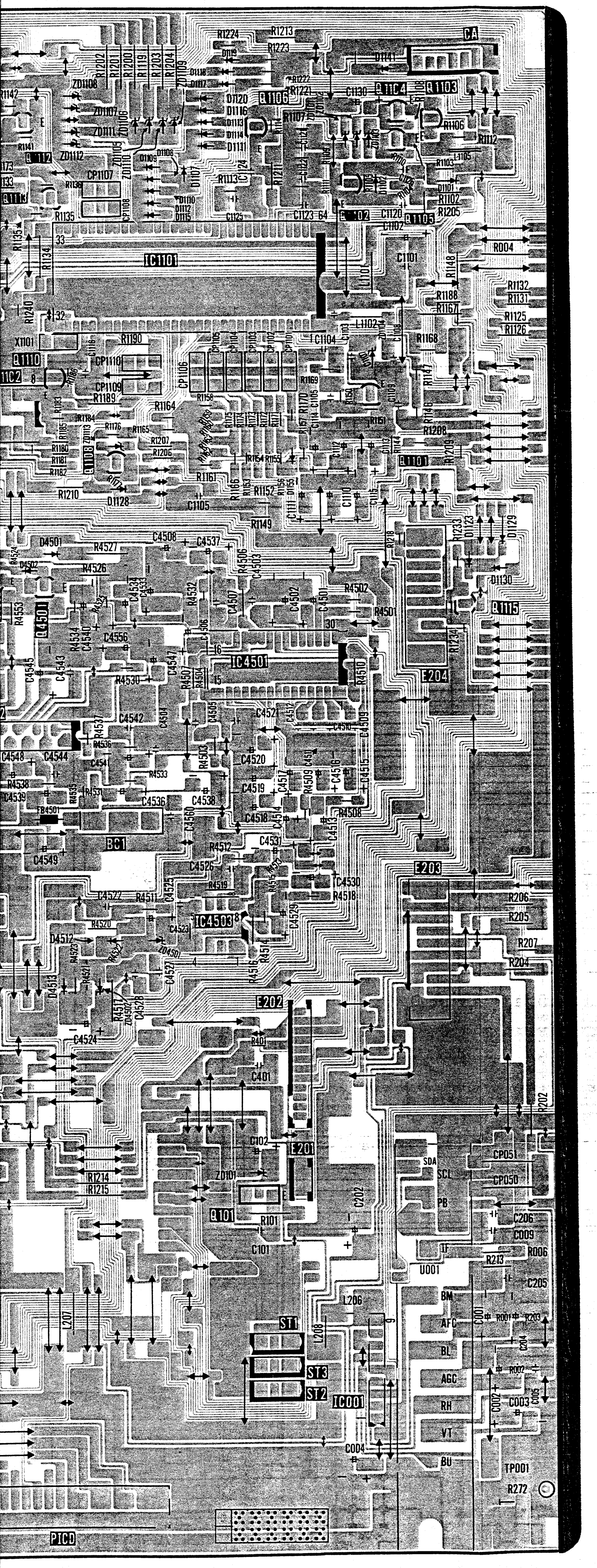
PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.


BB
GND
R OUT
12V
R IN
GND
L IN
GND
L OUT
GND
ZD4801 HZS12C1
ZD4802 HZS12C1
ZD4803 HZS12C1
ZD4804 HZS12C1
C4804 68P
C4805 82P
R4802 100K
C4803 33/16
R4803 47K
C4802 6800P
R4801 10K
R4805 47K
R4806 10K
C4807 0.047
C4806 10/16
C4801 100/16
R4813 10K
C4815 33/16
R4812 10K
C4814 6800P
R4811 10K
R4808 47K
R4807 10K
C4813 0.047
C4808 22/16
C4809 10/16
R4809 47K
C4811 100/16
C4812 82P
R4810 100K
C4810 68P
3.3
SP404 6x4
SP401 6x13
SP405 6x4
SP402 6x13
A
R OUT
G
L OUT
TERMINAL P.W.B.
UT L G G R
E4001
+12V
L3502 100
IC502 LA7016
PAL/NTSC C CHANGE
B
Q1302 2SC1214
R312 10K
R1372 100
COMPOSIT
C1302 10/16
R320 100
Q303 2SC3413
L3503 100
C3505 100/16
C3506 100/16
R1370 1K
R504 10K
60
R505 10K
R503 100
C501 100P
C502 56P
R501 1.5K
L501 6.8
C503 56P
R502 560
C504 0.01
R321 470
CIN
C509 0.01
C5035 27P
C
Q1301 2SC1214
Q5001 2SC3413
R5006 180 RD1/4J
C5001 47/16 CE-M
R5033 100
Q5009 2SC3413
R506 15K
R1373 100
L510 33
R1371 1K
R3501 220
CP382 4.5MHz
DL5001 SDL4242
Q5002 2SC3413
R5003 100
R5008 1K
R5005 680
C5008 100/16 CE-M
C5003 100/16 CE-M
R5016 560
R5019 1K
R5030 6.8K
R5023 390
R5027 1.8K
5.3V
Q5008 2SC3413
R510 10K
R507 100
R511 10K
R512 15K
Q501 2SC3413
Q510 2SC3413
R508 47K
C5004 39P CCSL-J
DL5003
IN OUT
L5001
Q5004 2SC3413
L5002 5.6uH
R5020 330
C5006 82P CCSL-J
R5012 560
R5007 47K
R5011 100
R5013 1K
Q5003 2SC3413
R5014 560
R5018 500-B
R5017 820
C5007 0.01 CK-K
R5022 2K-B
C5005 0.01 MYL-M
R5015 1K-B
C5009 100/16 CE-M
R5032 100
Q5007 2SA854S Q/R
1.6V
R5034A 2.7K
R5028 1.2K
DL5004
Q5006 2SC3413
R5025 220
R5034 1K
R5035 1K
C5051 100P
R5021 1K
R5031 4.7K
R5024 180
R5026 10K
R5052 1K
Q5005 2SC3413
R5029 2.2K
CC
TO MAIN P.W.B.
TERMINAL GND
NC
Y OUT
GND
C OUT
GND
R5002 1K
DL5002 SBP4370
C5002 0.01 CK-K
R5004 820
R5009 1K
R5010 47K
Q5051 2SC3413
D
R509 10K
L3504 100
C3507 100/16
IC301 M51334XS
PAL/SECAM/NTSC CHANGE
R5053 1K
NTSC
C1322 10/16
R5051 560
R390 100
R5054 220
L5050 15
C5050 100P
PAL
L3003 33u
R380 1K
Q381 2SC3413
R381 330
CP380 4.43MHz
C380 68P
R383 680
DL381
R382 1K
R384 680
R308 100
C317 10/16
C3199 100/16 CE-M
Q3015 2SC1741S P/Q/R
R3139 330
Q3014 2SC1741 P/Q/R
R3135 330
R3140 180 RD1/8J
R3141 75
R3136 56 (1/2W)
C3080 10/16 CE-M
C3081 10/16 CE-M
R3137 75
C3082 470/16 CE-M
C3083 10000P CK-K
R3131 1K
R3133 1K
IC1303 LA7016
SECAM DET CHANGE
E
Y
C
R1337 1K
C1320 0.1
C1321 0.1
D1300 1SS270
R3138 100K
R3142 100K
R3130 100K
R3132 100K
R3134 100K
S
COUT
R1374 47K
YOUT
BELL
V
L
R
MONITOR OUT
PH
TO MAIN P.W.B.
C415 47/16
1 H.MUTE
3 L
4 R
(L)
(R)
R425 1K
R424 1K
C416 47/16
2 GND
F
R14 75
J401
VIDEO3 S IN
CONTROL JACK P.W.B. (1)
6
7
8
9

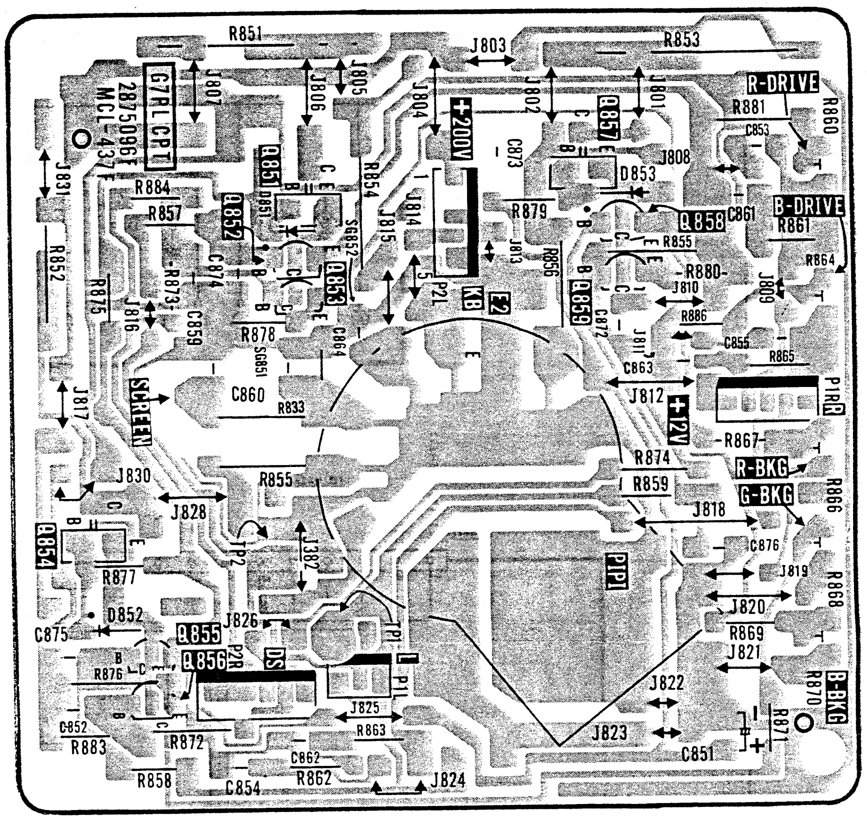
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100kΩ/V).
  Voltage taken on a complex color bar signal including a standard color bar signal.

主印刷電路板
MAIN P.W.B

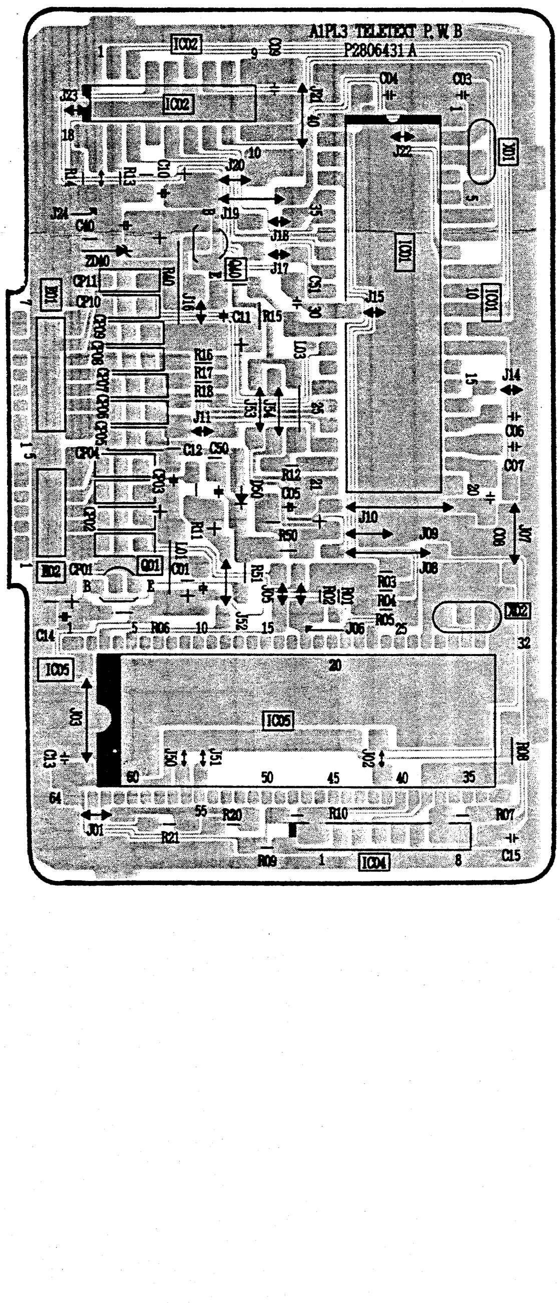

JA
PH
PB
PIL
P1R
YA
WOF
PM
12V
#GND
TT1
YC
YB
TT3
TT2
BC1
T702
+B
+56V
+8
(200)
+25V
+14V
200V
GND
H
ABL
V.CUT
KB
HEATER
+200V
PICA
PICB
PICC
PICD
A1PL3 (29) MAIN P.W.B.


CA
IC1101
IC4501
IC4503
BC1
E204
E203
E202
E201
Q101
ST1
ST3
ST2
IC001
SDA
SCL
PB
IF
U001
BM
AFC
BL
AGC
RH
VT
BU
TP001
R272
PICD

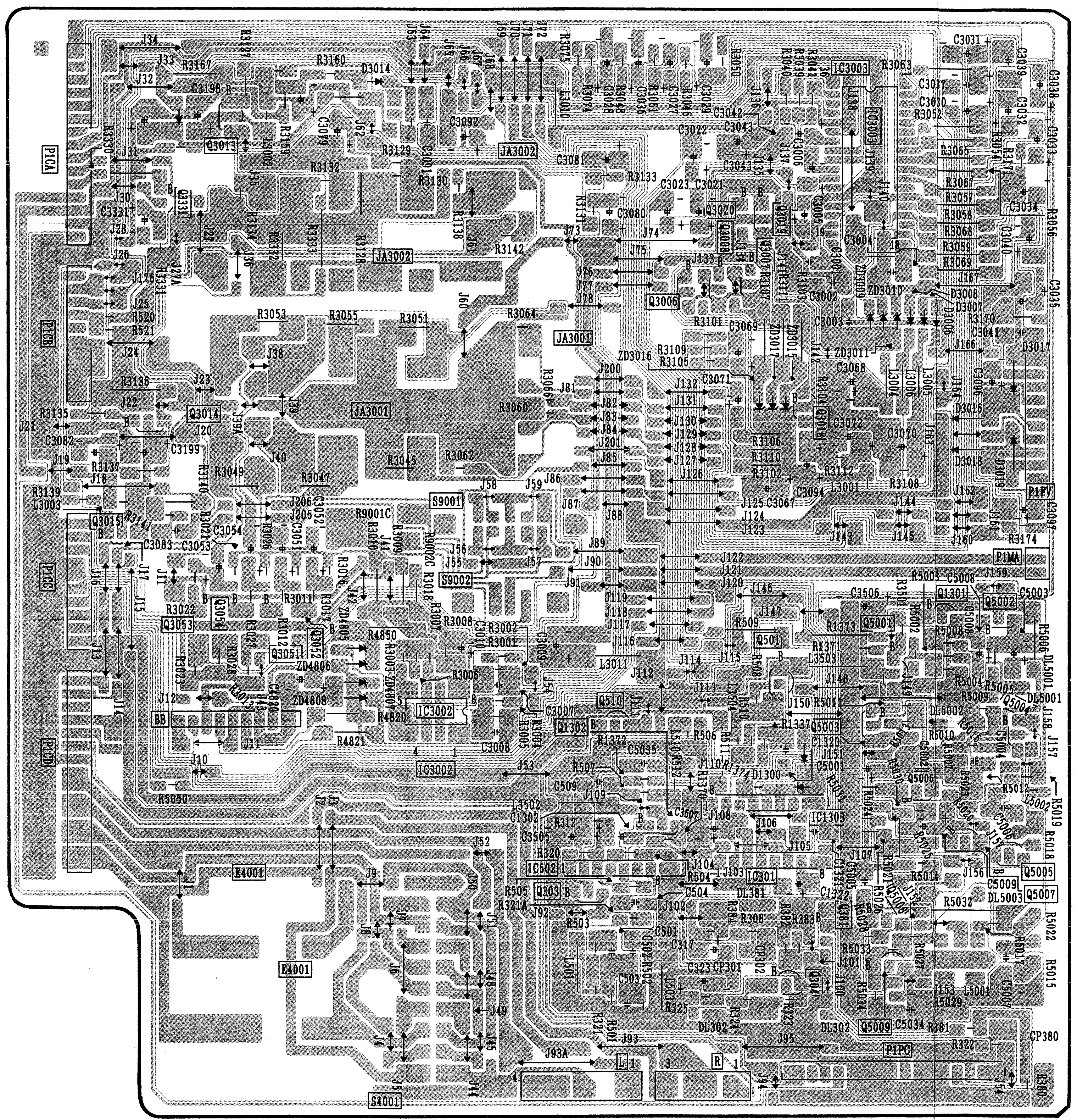
CPT 印刷電路板
CPT P.W.B


G7RL CPT
2875096
MCL-437
R-DRIVE
B-DRIVE
G-DRIVE
+200V
+12V
KB
SCREEN
R-BKG
G-BKG
B-BKG
P1RQ
PIP1

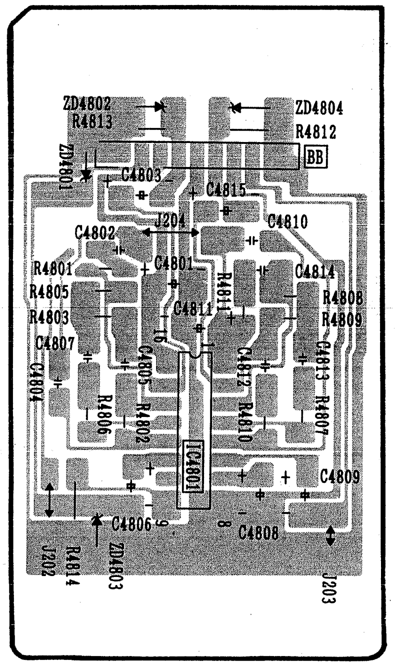
電文本印刷電路板
TELETEXT P.W.B


A1PL3 TELETEXT P.W.B
P2806431 A
IC02
IC01
IC05
IC04
X001

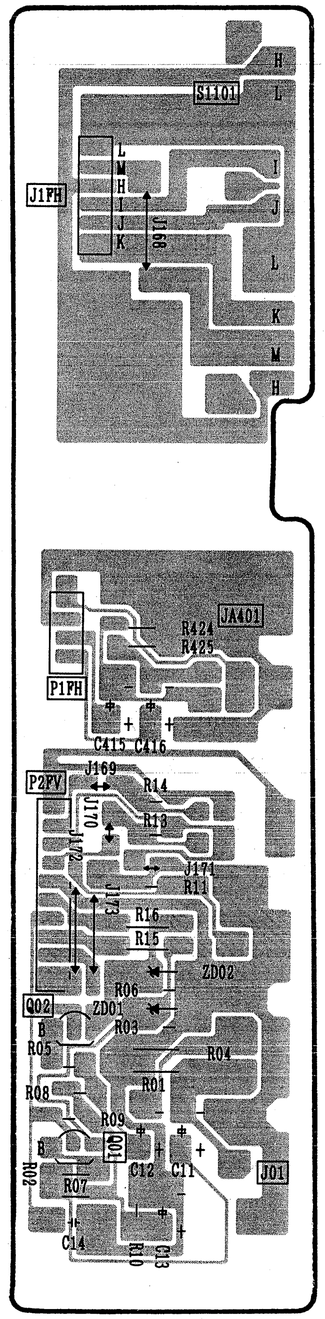
控制印刷電路板（A）
CONTROL P.W.B


P1CA
P1CB
P1CC
P1CD
P1MA
P1FV
P1PC
JA3001
JA3002
IC3002
IC3003
E4001
S4001
S9001
S9002
CP380
R380

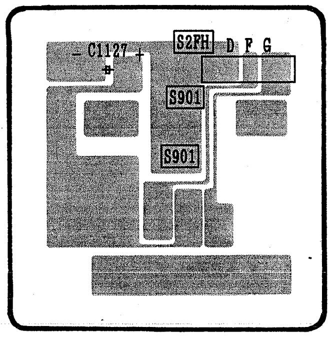
控制印刷電路板（D）
CONTROL P.W.B(D)

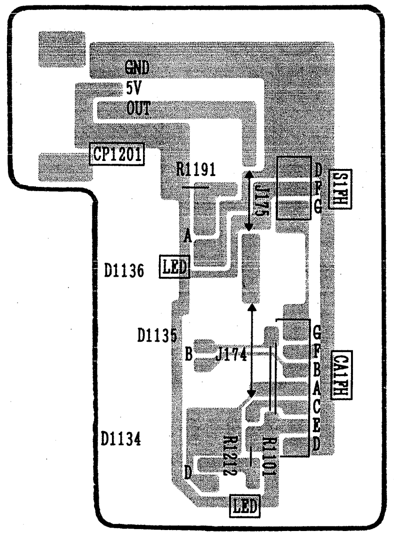

ZD4802
ZD4804
R4813
R4812
BB
IC4801
J202
J203
ZD4803

控制印刷電路板（E）
CONTROL P.W B(E)


S1101
J1FH
J168
JA401
P1FH
P2FV
Q01
Q02
J01
ZD01
ZD02

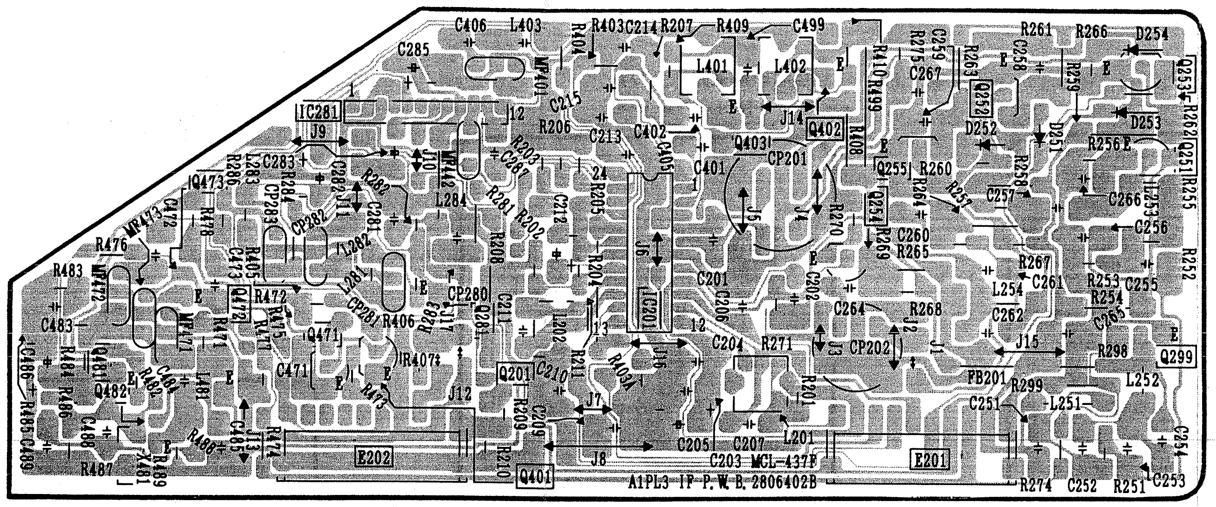
控制印刷電路板（C）
CONTROL P.W.B(C)


C1127
S2FH
D F G
S901
S901

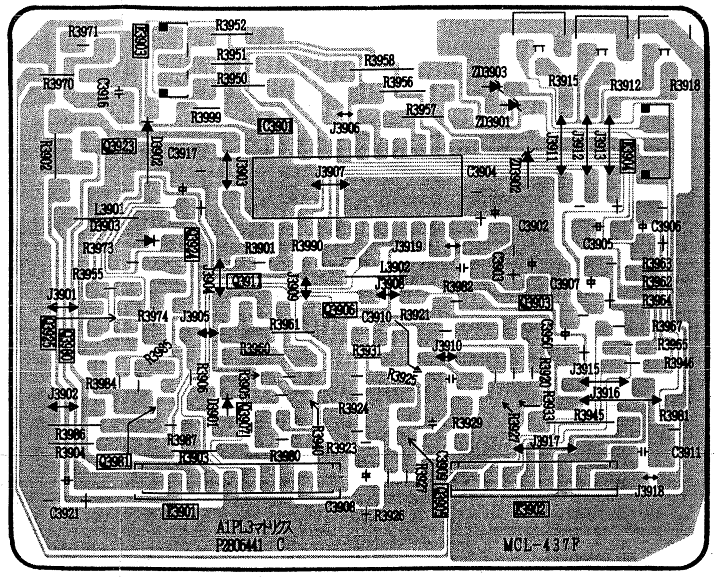

GND
5V
OUT
CP1201
R1191
J175
S1FH
D1136
LED
D1135
J174
CA1PH
D1134
R1212
R1101
LED

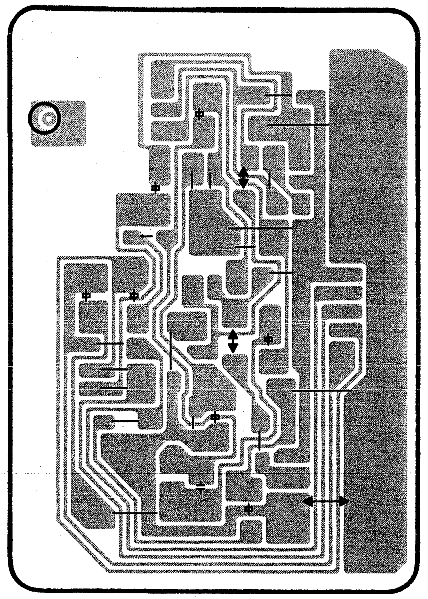
控制印刷電路板（B）
CONTROL P.W.B(B)

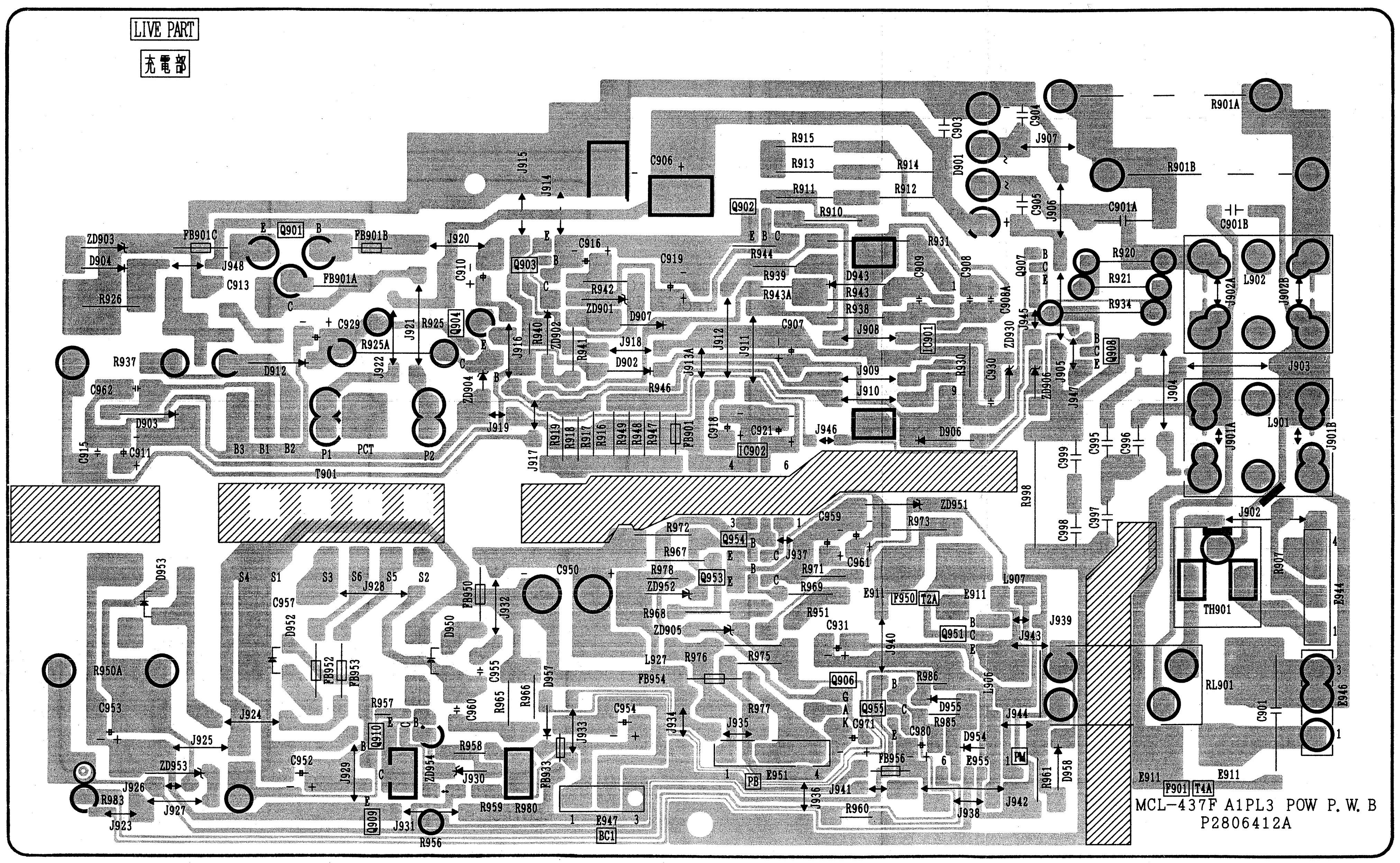
中周印刷電路板
IF P.W.B

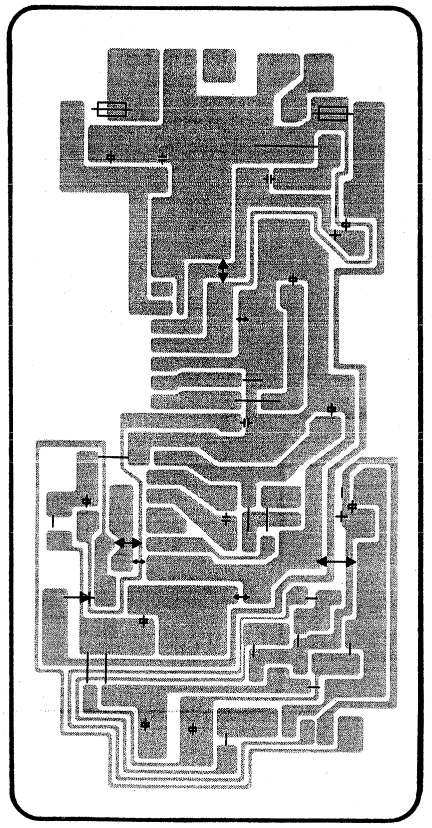

A1PL3 IF P.W.B 2806402B
MCL-437F
IC281
IC201
Q401
E201
E202

矩陣印刷電路板
MATRIX P.W.B


A1PL3マトリックス
P2806441 C
MCL-437F
E3901
E3902
J3907




LIVE PART
充電部
T901
PCT
TH901
RL901
L901
L902
IC901
IC902
MCL-437F A1PL3 POW P.W.B
P2806412A



功率輸出印刷電路板
POWER OUTPUT P.W.B

REPLACEMENT PARTS LIST

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

ABBREVIATIONS		
	Capacitors	CD:Ceramic disk, PF:Polyester film, EL:Electrolytic, PP:Polypropylene, PR:Paper, TA:Tantalum, TM:Trimmer.
	Resistors	CF:Carbon film, CC:Carbon composition, MF:Metal oxide film, VR:Variable resistor, WW:Wire would, FR:Fuse resistor, MG:Metal glazed
	Semiconductors	TR:Transistor, DI:Diode, ZD:Zener diode, VA:Varistor, TH:Thermistor, IC:IC.

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
C001	0800023	CAPACITOR ELECTROLYTIC 22MF 16V	C1130	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C002	0800023	CAPACITOR ELECTROLYTIC 22MF 16V	C1131	0248674	CD 39PF +-5% 50V
C003	0800023	CAPACITOR ELECTROLYTIC 22MF 16V	C1132	0248674	CD 39PF +-5% 50V
C004	0800327	CAPACITOR ELECTROLYTIC 100MF 25V	C1133	0248674	CD 39PF +-5% 50V
C005	0880018	PF 0.22MF +-10% 50V	C1134	0248640	CD 10PF +-0.25% 50V
C009	0246462	CD 82PF +-10% 50V	C1135	0800079	CAPACITOR ELECTROLYTIC 1000MF 6.3V
C01	0800047	CAPACITOR ELECTROLYTIC 100MF 6.3V	C1136	0800023	CAPACITOR ELECTROLYTIC 22MF 16V
C03	0890121	CD 33PF +-5% 50V	C1137	0274763	PF 0.01MF +-10% 50V
C04	0880031	PF 1000PF +-10% 50V	C1139	0248640	CD 10PF +-0.25% 50V
C05	0800072	CAPACITOR ELECTROLYTIC 470MF 6.3V	⚠C115	0248684	CD 100PF +-5% 50V
C06	0880044	PF 0.01MF +-10% 50V	C12	0800015	EL 10MF 16V
C07	0880044	PF 0.01MF +-10% 50V	C12	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V
C08	0880044	PF 0.01MF +-10% 50V	C13	0800041	CAPACITOR ELECTROLYTIC 47MF 16V
C09	0880044	PF 0.01MF +-10% 50V	C13	0880044	PF 0.01MF +-10% 50V
C10	0800047	CAPACITOR ELECTROLYTIC 100MF 6.3V	C1302	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V
C101	0800327	CAPACITOR ELECTROLYTIC 100MF 25V	C1320	0880057	PF 0.1MF +-10% 50V
C102	0800318	CAPACITOR ELECTROLYTIC 47MF 25V	C1321	0880057	PF 0.1MF +-10% 50V
C11	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V	C1322	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V
C11	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V	C1339	0800012	CAPACITOR ELECTROLYTIC 4.7MF 50V
C1101	0880044	PF 0.01MF +-10% 50V	C1340	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C1102	0800353R	CAPACITOR ELECTROLYTIC 470MF 16V	C14	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C1103	0246454	CD 39PF +-5% 50V	C14	0880044	PF 0.01MF +-10% 50V
C1104	0249093	CD 470PF +-5% 50V	C15	0880044	PF 0.01MF +-10% 50V
C1105	0248690	CD 180PF +-5% 50V	C201	0890058	CD 8PF +-0.5 50V
C1106	0880031	PF 1000PF +-10% 50V	C202	0800361	CAPACITOR ELECTROLYTIC 1000MF 16V
C1107	0248694	CD 270PF +-5% 50V	C202	0880031	PF 1000PF +-10% 50V
C1108	0274771	PF 0.047MF +-10% 50V	C203	0880031	PF 1000PF +-10% 50V
C1109	0274771	PF 0.047MF +-10% 50V	C204	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C1110	0800003	CAPACITOR ELECTROLYTIC 1MF 50V	C204	0890058	CD 8PF +-0.5 50V
C1111	0800003	CAPACITOR ELECTROLYTIC 1MF 50V	C205	0800049	CAPACITOR,ELECTROLYTIC 100MF 16V
C1112	0800003	CAPACITOR ELECTROLYTIC 1MF 50V	C205	0880031	PF 1000PF +-10% 50V
C1113	0800003	CAPACITOR ELECTROLYTIC 1MF 50V	C206	0880031	PF 1000PF +-10% 50V
C1114	0800003	CAPACITOR ELECTROLYTIC 1MF 50V	C206	0880031	PF 1000PF +-10% 50V
C1115	0800003	CAPACITOR ELECTROLYTIC 1MF 50V	C207	0890066	CD 27PF +-5% 50V
C1118	0800023	CAPACITOR ELECTROLYTIC 22MF 16V	C209	0880053	PF 0.047MF +-10% 50V
C1119	0890084	CD 560PF +-10% 50V	C210	0880062	PF 0.22MF +-10% 50V
C1120	0274771	PF 0.047MF +-10% 50V	C211	0890118	CD 22PF +-5% 50V
C1121	0248686	CD 120PF +-5% 50V	C212	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C1122	0248686	CD 120PF +-5% 50V	C213	0880031	PF 1000PF +-10% 50V
C1123	0248686	CD 120PF +-5% 50V	C214	0880055	PF 0.068MF +-10% 50V
C1124	0248696	CD 330PF +-5% 50V	C215	0890076	CD 150PF +-10% 50V
C1125	0248690	CD 180PF +-5% 50V	C220A	0890071	CD 56PF +-5% 50V
C1126	0274655	PF 2200PF +-5% 50V	C251	0890114	CD 10PF +-0.5% 50V
C1127	0800049	CAPACITOR,ELECTROLYTIC 100MF 16V	C252	0890114	CD 10PF +-0.5% 50V

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
C253	0890114	CD 10PF +-0.5% 50V	C307	0880031	PF 1000PF +-10% 50V
C254	0246467	CD 130PF +-5% 50V	C3070	0800058	CAPACITOR ELECTROLYTIC 220MF 16V
C255	0880031	PF 1000PF +-10% 50V	C3071	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V
C256	0880031	PF 1000PF +-10% 50V	C3072	0800058	CAPACITOR ELECTROLYTIC 220MF 16V
C257	0880031	PF 1000PF +-10% 50V	C3079	0800074	CAPACITOR ELECTROLYTIC 470MF 16V
C258	0880031	PF 1000PF +-10% 50V	C308	0252396	EL 10MF 16V
C259	0880031	PF 1000PF +-10% 50V	C3080	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V
C260	0890114	CD 10PF +-0.5% 50V	C3081	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V
C261	0890114	CD 10PF +-0.5% 50V	C3082	0800074	CAPACITOR ELECTROLYTIC 470MF 16V
C262	0246467	CD 130PF +-5% 50V	C3083	0244171	CD 0.01MF +80-20% 50V
C264	0880031	PF 1000PF +-10% 50V	C309	0880044	PF 0.01MF +-10% 50V
C265	0880031	PF 1000PF +-10% 50V	C3091	0244171	CD 0.01MF +80-20% 50V
C266	0880031	PF 1000PF +-10% 50V	C3092	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V
C267	0880031	PF 1000PF +-10% 50V	C3094	0800042	CAPACITOR ELECTROLYTIC 47MF 25V
C281	0880044	PF 0.01MF +-10% 50V	C3096	0800005	CAPACITOR,ELECTROLYTIC 2.2MF 50V
C282	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V	C3097	0800005	CAPACITOR,ELECTROLYTIC 2.2MF 50V
C283	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V	C3098	0800074	CAPACITOR ELECTROLYTIC 470MF 16V
C285	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V	C310	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C287	0880044	PF 0.01MF +-10% 50V	C311	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V
C3005	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V	C312	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C3006	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V	C313	0284447R	EL 2.2MF 50V
C3007	0890077	CD 180PF +-10% 50V	C315	0800087	CAPACITOR ELECTROLYTIC 2200MF 16V
C3008	0890077	CD 180PF +-10% 50V	C316	0800327	CAPACITOR ELECTROLYTIC 100MF 25V
C3009	0800049	CAPACITOR,ELECTROLYTIC 100MF 16V	C317	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V
C3010	0800074	CAPACITOR ELECTROLYTIC 470MF 16V	C3198	0800049	CAPACITOR,ELECTROLYTIC 100MF 16V
C3021	0252396	EL 10MF 16V	C3199	0800049	CAPACITOR,ELECTROLYTIC 100MF 16V
C3022	0800003	CAPACITOR ELECTROLYTIC 1MF 50V	C3201	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C3023	0800003	CAPACITOR ELECTROLYTIC 1MF 50V	C3202	0800327	CAPACITOR ELECTROLYTIC 100MF 25V
C3027	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V	C3203	0800327	CAPACITOR ELECTROLYTIC 100MF 25V
C3028	0800003	CAPACITOR ELECTROLYTIC 1MF 50V	C3204	0880044	PF 0.01MF +-10% 50V
C3029	0800003	CAPACITOR ELECTROLYTIC 1MF 50V	C3205	0880044	PF 0.01MF +-10% 50V
C3030	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V	C3206	0246442	CD 12PF +-5% 50V
C3031	0800003	CAPACITOR ELECTROLYTIC 1MF 50V	C3207	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C3032	0800003	CAPACITOR ELECTROLYTIC 1MF 50V	C3208	0880044	PF 0.01MF +-10% 50V
C3033	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V	C3209	0880044	PF 0.01MF +-10% 50V
C3034	0800003	CAPACITOR ELECTROLYTIC 1MF 50V	C321	0800361	CAPACITOR ELECTROLYTIC 1000MF 16V
C3035	0800003	CAPACITOR ELECTROLYTIC 1MF 50V	C3210	0252396	EL 10MF 16V
C3036	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V	C3211	0880044	PF 0.01MF +-10% 50V
C3037	0244171	CD 0.01MF +80-20% 50V	C3212	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C3038	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V	C3213	0243510	CD 560PF +-10% 500V
C3039	0244171	CD 0.01MF +80-20% 50V	C3214	0880031	PF 1000PF +-10% 50V
C3040	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V	C3215	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C3041	0244171	CD 0.01MF +80-20% 50V	C3216	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C3042	0800023	CAPACITOR ELECTROLYTIC 22MF 16V	C3217	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C3043	0800049	CAPACITOR,ELECTROLYTIC 100MF 16V	C3218	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C305	0880031	PF 1000PF +-10% 50V	C3219	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C3051	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V	C322	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V
C3052	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V	C3221	0252417	EL 1MF 50V
C3053	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V	C3222	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C3054	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V	C3223	0246454	CD 39PF +-5% 50V
C3055	0800048	CAPACITOR ELECTROLYTIC 100MF 10V	C3330	0800041	CAPACITOR ELECTROLYTIC 47MF 16V
C306	0890061	CD 10PF +-0.5% 50V	C3331	0800073	CAPACITOR ELECTROLYTIC 470MF 10V
C3067	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V	C3332	0800049	CAPACITOR,ELECTROLYTIC 100MF 16V
C3068	0800058	CAPACITOR ELECTROLYTIC 220MF 16V	C3505	0800049	CAPACITOR,ELECTROLYTIC 100MF 16V
C3069	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V	C3506	0800049	CAPACITOR,ELECTROLYTIC 100MF 16V

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	DESCRIPTION
C3507	0800049	CAPACITOR,ELECTROLYTIC 100MF 16V
C380	0890072	CD 68PF +-5% 50V
C3902	0800082	CAPACITOR ELECTROLYTIC 1000MF 16V
C3903	0274763	PF 0.01MF +-10% 50V
C3904	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C3905	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C3906	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C3907	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C3908	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V
C3909	0248694	CD 270PF +-5% 50V
C3910	0248699	CD 390PF +-5% 50V
C3911	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V
C3916	0244113	CD 330PF +-10% 50V
C3917	0800058	CAPACITOR ELECTROLYTIC 220MF 16V
C3921	0800058	CAPACITOR ELECTROLYTIC 220MF 16V
C3950	0800041	CAPACITOR ELECTROLYTIC 47MF 16V
C40	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V
C401	0274669	PF 0.033MF +-5% 50V
C401	0880044	PF 0.01MF +-10% 50V
C402	0880044	PF 0.01MF +-10% 50V
C405	0880044	PF 0.01MF +-10% 50V
C406	0890067	CD 33PF +-5% 50V
C415	0800041	CAPACITOR ELECTROLYTIC 47MF 16V
C416	0800041	CAPACITOR ELECTROLYTIC 47MF 16V
C4501	0800007	CAPACITOR,ELECTROLYTIC 3.3MF 50V
C4502	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C4503	0880041	PF 5600PF +-10% 50V
C4504	0880057	PF 0.1MF +-10% 50V
C4506	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C4507	0880044	PF 0.01MF +-10% 50V
C4508	0800082	CAPACITOR ELECTROLYTIC 1000MF 16V
C4509	0880052	PF 0.039MF 50V +-10%
C4510	0880044	PF 0.01MF +-10% 50V
C4511	0880052	PF 0.039MF 50V +-10%
C4512	0880052	PF 0.039MF 50V +-10%
C4513	0284447R	EL 2.2MF 50V
C4514	0284447R	EL 2.2MF 50V
C4515	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C4516	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C4517	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C4518	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C4519	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C4520	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C4521	0880044	PF 0.01MF +-10% 50V
C4522	0880044	PF 0.01MF +-10% 50V
C4523	0800327	CAPACITOR ELECTROLYTIC 100MF 25V
C4524	0800327	CAPACITOR ELECTROLYTIC 100MF 25V
C4525	0890078R	CD 220PF +-10% 50V
C4526	0890076	CD 150PF +-10% 50V
C4527	0890078R	CD 220PF +-10% 50V
C4528	0890076	CD 150PF +-10% 50V
C4529	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C4530	0800107	CAPACITOR ELECTROLYTIC 0.47MF 50V
C4531	0800107	CAPACITOR ELECTROLYTIC 0.47MF 50V
C4533	0800353R	CAPACITOR ELECTROLYTIC 470MF 16V
C4534	0800012	CAPACITOR ELECTROLYTIC 4.7MF 50V
C4536	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C4537	0800291	CAPACITOR ELECTROLYTIC 10MF 16V
C4538	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C4539	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C4540	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C4541	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C4542	0880044	PF 0.01MF +-10% 50V
C4543	0880044	PF 0.01MF +-10% 50V
C4544	0880044	PF 0.01MF +-10% 50V
C4545	0800327	CAPACITOR ELECTROLYTIC 100MF 25V
C4546	0800318	CAPACITOR ELECTROLYTIC 47MF 25V
C4547	0800318	CAPACITOR ELECTROLYTIC 47MF 25V
C4548	0800318	CAPACITOR ELECTROLYTIC 47MF 25V
C4549	0800319R	CAPACITOR ELECTROLYTIC 47MF 35V
C4550	0880057	PF 0.1MF +-10% 50V
C4551	0880057	PF 0.1MF +-10% 50V
C4552	0880057	PF 0.1MF +-10% 50V
C4553	0284442F	EL 2200MF 35V
C4554	0800363	CAPACITOR ELECTROLYTIC 1000MF 35V
C4555	0800363	CAPACITOR ELECTROLYTIC 1000MF 35V
C4556	0800318	CAPACITOR ELECTROLYTIC 47MF 25V
C4560	0880018	PF 0.22MF +-10% 50V
C4570	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C4571	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C471	0890066	CD 27PF +-5% 50V
C472	0890066	CD 27PF +-5% 50V
C473	0890066	CD 27PF +-5% 50V
C4801	0800326	CAPACITOR ELECTROLYTIC 100MF 16V
C4802	0880042	PF 6800PF +-10% 50V
C4803	0800308R	CAPACITOR ELECTROLYTIC 33MF 16V
C4804	0890072	CD 68PF +-5% 50V
C4805	0890073	CD 82PF +-5% 50V
C4806	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C4807	0880053	PF 0.047MF +-10% 50V
C4808	0800299R	CAPACITOR ELECTROLYTIC 22MF 16V
C4809	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C4810	0890072	CD 68PF +-5% 50V
C4811	0800326	CAPACITOR ELECTROLYTIC 100MF 16V
C4812	0890073	CD 82PF +-5% 50V
C4813	0880053	PF 0.047MF +-10% 50V
C4814	0880042	PF 6800PF +-10% 50V
C4815	0800308R	CAPACITOR ELECTROLYTIC 33MF 16V
C4820	0800049	CAPACITOR,ELECTROLYTIC 100MF 16V
C483	0880009	PF 0.01MF +-10% 50V
C484	0890053	CD 3PF +-0.25% 50V
C485	0880016	PF 0.1MF +-10% 50V
C486	0800015	CAPACITOR,ELECTROLYTIC 10MF 16V
C488	0880003	PF 1000PF +-10% 50V
C489	0890076	CD 150PF +-10% 50V
C499	0880044	PF 0.01MF +-10% 50V
C50	0800007	CAPACITOR,ELECTROLYTIC 3.3MF 50V
C5001	0248107	CD 220PF +-5% 50V
C5001	0800041	CAPACITOR ELECTROLYTIC 47MF 16V
C5002	0244171	CD 0.01MF +80-20% 50V

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	DESCRIPTION
C5002	0880044	PF 0.01MF +-10% 50V
C5003	0244117	CD 680PF +-10% 50V
C5003	0800049	CAPACITOR,ELECTROLYTIC 100MF 16V
C5004	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C5004	0890068	CD 39PF +-5% 50V
C5005	0880044	PF 0.01MF +-10% 50V
C5005	0890067	CD 33PF +-5% 50V
C5006	0246413R	CD 3PF +-5% 50V
C5006	0246462	CD 82PF +-10% 50V
C5007	0244171	CD 0.01MF +80-20% 50V
C5007	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C5008	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C5008	0800049	CAPACITOR,ELECTROLYTIC 100MF 16V
C5009	0800049	CAPACITOR,ELECTROLYTIC 100MF 16V
C5009	0880057	PF 0.1MF +-10% 50V
C501	0248684	CD 100PF +-5% 50V
C5010	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C5011	0246458	CD 56PF +-5% 50V
C5013	0880044	PF 0.01MF +-10% 50V
C502	0246458	CD 56PF +-5% 50V
C5021	0880057	PF 0.1MF +-10% 50V
C5022	0246442	CD 12PF +-5% 50V
C5023	0880044	PF 0.01MF +-10% 50V
C5024	0880044	PF 0.01MF +-10% 50V
C5025	0880044	PF 0.01MF +-10% 50V
C5026	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C5027	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V
C5028	0880044	PF 0.01MF +-10% 50V
C503	0246458	CD 56PF +-5% 50V
C5030	0800023	CAPACITOR ELECTROLYTIC 22MF 16V
C5031	0800012	CAPACITOR ELECTROLYTIC 4.7MF 50V
C5032	0800372	CAPACITOR ELECTROLYTIC 3300MF 16V
C5033	0248694	CD 270PF +-5% 50V
C5034	0248694	CD 270PF +-5% 50V
C5035	0248694	CD 270PF +-5% 50V
C5035	0890066	CD 27PF +-5% 50V
C5037	0248690	CD 180PF +-5% 50V
C504	0880044	PF 0.01MF +-10% 50V
C5041	0248107	CD 220PF +-5% 50V
C5042	0880044	PF 0.01MF +-10% 50V
C5045	0248680	CD 68PF +-5% 50V
C5050	0880044	PF 0.01MF +-10% 50V
C5050	0890074	CD 100PF +-5% 50V
C508	0252417	EL 1MF 50V
C509	0880044	PF 0.01MF +-10% 50V
C51	0890083	CD 470PF +-10% 50V
C510	0880044	PF 0.01MF +-10% 50V
C511	0880044	PF 0.01MF +-10% 50V
C512	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C513	0880044	PF 0.01MF +-10% 50V
C515	0246458	CD 56PF +-5% 50V
C516	2784695	TM 50PF
C517	0880044	PF 0.01MF +-10% 50V
C518	0880057	PF 0.1MF +-10% 50V
C519	0284447R	EL 2.2MF 50V
C520	0880044	PF 0.01MF +-10% 50V
C521	0274667	PF 0.022MF +-5% 50V
C522	0252417	EL 1MF 50V
C523	0274667	PF 0.022MF +-5% 50V
C524	0880044	PF 0.01MF +-10% 50V
C526	0880031	PF 1000PF +-10% 50V
C527	0248680	CD 68PF +-5% 50V
C530	0800082	CAPACITOR ELECTROLYTIC 1000MF 16V
C532	0880057	PF 0.1MF +-10% 50V
C574	0246462	CD 82PF +-10% 50V
C580	0880044	PF 0.01MF +-10% 50V
C601	0274669	PF 0.033MF +-5% 50V
C6010	0252417	EL 1MF 50V
C6010B	0284621	EL 0.47MF 50V
C606	0880044	PF 0.01MF +-10% 50V
C607	0890067	CD 33PF +-5% 50V
C608	0890084	CD 560PF +-10% 50V
C609	0800007	CAPACITOR,ELECTROLYTIC 3.3MF 50V
C610	0800069	CAPACITOR,ELECTROLYTIC 330MF 50V
C611	0880057	PF 0.1MF +-10% 50V
C612	0800107	CAPACITOR ELECTROLYTIC 0.47MF 50V
C613	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C615	0880057	PF 0.1MF +-10% 50V
C616	0252969	EL 2200MF 25V
C618	0292716	TA 1MF +-10% 20V
C620	0800032	CAPACITOR-ELECTROLYTIC 33MF 16V
C623	0800327	CAPACITOR ELECTROLYTIC 100MF 25V
C625	0880018	PF 0.22MF +-10% 50V
C651	0800023	CAPACITOR ELECTROLYTIC 22MF 16V
C652	0284446R	EL 1MF 50V
C653	0284446R	EL 1MF 50V
C654	0800318	CAPACITOR ELECTROLYTIC 47MF 25V
C655	0284656R	EL 33MF 10V
C656	0244109	CD 4700PF +-10% 50V
C657	0284621	EL 0.47MF 50V
C659	0800107	CAPACITOR ELECTROLYTIC 0.47MF 50V
C660	0279849	PF 0.015MF +-10% 100V
C681	0252396	EL 10MF 16V
C686	0274655	PF 2200PF +-5% 50V
C700	0800058	CAPACITOR ELECTROLYTIC 220MF 16V
C7000	0800327	CAPACITOR ELECTROLYTIC 100MF 25V
C7001	0244503	CD 1500PF +-10% 50V
C7002	0800012	CAPACITOR ELECTROLYTIC 4.7MF 50V
C7003	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C7004	0274667	PF 0.022MF +-5% 50V
C7005	0274673	PF 0.068MF +-5% 50V
C703	0274667	PF 0.022MF +-5% 50V
C704	0274765	PF 0.015MF +-10% 50V
C705	0284447R	EL 2.2MF 50V
C706	0274757	PF 3300PF +-10% 50V
C707	0274655	PF 2200PF +-5% 50V
C708	0244104	CD 1800PF +-10% 50V
C709	0248690	CD 180PF +-5% 50V
C711	0249093	CD 470PF +-5% 50V
C715	0247856	CD 120PF +-5% 500V

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
C716	0244504	CD 1800PF +-10% 500V	C907	0258114	EL 330 MF 50V
C717	0244501	CD 1000PF +-10% 500V	⚠C908	0274659	PF 4700PF +-5% 50V
C718	0274667	PF 0.022MF +-5% 50V	C908A	0274655	PF 2200PF +-5% 50V
C719	0248696	CD 330PF +-5% 50V	C909	0248694	CD 270PF +-5% 50V
⚠C721	0299940F	PF 0.015MF +-5% 1.6KV	C910	0255019F	EL 220MF 63V
C722	0299983	PP 0.018MF +-5% 630V	C911	0800016	CAPACITOR ELECTROLYTIC 10MF 25V
⚠C723	0299932	PP 0.33MF +-10% 200V	C913	0246365	CD 3900PF +-10% 2KV
C7230	0251724	EL 470MF 160V	C915	0274661	PF 6800PF +-5% 50V
C7231	0253974N	EL 33MF 250V	C916	0800047	CAPACITOR ELECTROLYTIC 100MF 6.3V
C7232	0800021	CAPACITOR ELECTROLYTIC 10MF 100V	C918	0800016	CAPACITOR ELECTROLYTIC 10MF 25V
⚠C724	0299932	PP 0.33MF +-10% 200V	C919	0800053	CAPACITOR ELECTROLYTIC 100MF 50V
C727	0259472	EL 6.8MF 25V	C921	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C728	0890087	CD 1000PF +-10% 50V	C929	0253952R	EL 1MF 160V
C729	0244107	CD 3300PF +-10% 50V	C930	0274661	PF 6800PF +-5% 50V
C732	0800012	CAPACITOR ELECTROLYTIC 4.7MF 50V	C931	0800087	CAPACITOR ELECTROLYTIC 2200MF 16V
C733	0244104	CD 1800PF +-10% 50V	C935	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C7336	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V	C950	0284601	EL 1000MF 160V
C734	0284442F	EL 2200MF 35V	C952	0252987	EL 2200MF 50V
C735	0243510	CD 560PF +-10% 500V	C953	0800083	CAPACITOR ELECTROLYTIC 1000MF 25V
C740	0800036	CAPACITOR,ELECTROLYTIC 33MF 63V	C954	0252987	EL 2200MF 50V
C741	0800327	CAPACITOR ELECTROLYTIC 100MF 25V	C955	0245603	CD 220PF +-10% 1KV
C742	0800003	CAPACITOR ELECTROLYTIC 1MF 50V	C957	0244213	CD 1500PF +-10% 2KV
C743	0274667	PF 0.022MF +-5% 50V	C960	0245606	CD 560PF +-10% 1KV
C746	0880057	PF 0.1MF +-10% 50V	C961	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
C751	0800044	CAPACITOR ELECTROLYTIC 47MF 50V	C971	0800003	CAPACITOR ELECTROLYTIC 1MF 50V
⚠C753	0299668	PP 3600PF +-5% 1600V	C990	0800058	CAPACITOR ELECTROLYTIC 220MF 16V
⚠C754	0249491	CD 470PF +-10% 2.5KV	⚠C995	0249498	CD 1000PF 4000V
C756	0800003	CAPACITOR ELECTROLYTIC 1MF 50V	⚠C996	0249498	CD 1000PF 4000V
C771	0258596	EL 1MF 160V	⚠C997	0249498	CD 1000PF 4000V
C775	0244501	CD 1000PF +-10% 500V	⚠C998	0247974	CD 2200PF +-80-20%
⚠C782	0249491	CD 470PF +-10% 2.5KV	⚠C999	0247974	CD 2200PF +-80-20%
⚠C785	0244501	CD 1000PF +-10% 500V	RC255	0100041	CF 100 OHM +-5% 1/8W
C786	0247842	CD 33PF +-5% 500V	RL282	0100069	CF 1.5K OHM +-5% 1/8W
C787	0244501	CD 1000PF +-10% 500V	⚠RL901	2640336	RELAY
C788	0244104	CD 1800PF +-10% 50V	R001	0700048	CF 3.9K OHM +-5% 1/16W
C789	0880048	PF 0.022MF +-10% 50V	R002	0700048	CF 3.9K OHM +-5% 1/16W
C7912	0880044	PF 0.01MF +-10% 50V	R004	0700058	CF 22K OHM +-5% 1/16W
⚠C7913	0800291R	CAPACITOR ELECTROLYTIC 10MF 16V	R006	0100065	CF 1K OHM +-5% 1/8W
C795	0800327	CAPACITOR ELECTROLYTIC 100MF 25V	R01	0100123	CF 270K OHM +-5% 1/8W
C851	0800049	CAPACITOR,ELECTROLYTIC 100MF 16V	R01	0700054	CF 10K OHM +-5% 1/16W
C853	0248686	CD 120PF +-5% 50V	R02	0700041	CF 1K OHM +-5% 1/16W
C854	0248686	CD 120PF +-5% 50V	R02	0700054	CF 10K OHM +-5% 1/16W
C855	0890078R	CD 220PF +-10% 50V	R03	0700045	CF 2.2K OHM +-5% 1/16W
C860	0243425	CD 100PF +-10% 1.6KV	R03	0700054	CF 10K OHM +-5% 1/16W
C861	0248694	CD 270PF +-5% 50V	R04	0100123	CF 270K OHM +-5% 1/8W
C862	0248694	CD 270PF +-5% 50V	R04	0700054	CF 10K OHM +-5% 1/16W
C863	0248694	CD 270PF +-5% 50V	R05	0700041	CF 1K OHM +-5% 1/16W
C864	0244215	CD 2200PF +-10% 2KV	R05	0700054	CF 10K OHM +-5% 1/16W
C872	0800369N	CAPACITOR ELECTROLYTIC 3300MF 6.3V	R06	0700045	CF 2.2K OHM +-5% 1/16W
⚠C901	0279698	PF 0.22MF +-20% 250V	R06	0700054	CF 10K OHM +-5% 1/16W
⚠C901A	0279747	PF 0.022MF +-20% 100V	R07	0700054	CF 10K OHM +-5% 1/16W
C903	0248594F	CD 0.01MF +-80-20% 250V	R07	0700064	CF 56K OHM +-5% 1/16W
C904	0248593F	CD 4700PF +80-20% 250V	R08	0700054	CF 10K OHM +-5% 1/16W
C905	0248593F	CD 4700PF +80-20% 250V	R08	0700064	CF 56K OHM +-5% 1/16W
C906	0251885	EL 390MF 400V	R09	0700044	CF 1.8K OHM +-5% 1/16W

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
R09	0700054	CF 10K OHM +-5% 1/16W	R1155	0700056	CF 15K OHM +-5% 1/16W
R10	0700045	CF 2.2K OHM +-5% 1/16W	R1156	0700065	CF 68K OHM +-5% 1/16W
R10	0700054	CF 10K OHM +-5% 1/16W	R1157	0700054	CF 10K OHM +-5% 1/16W
R101	0114149	CF 560 OHM +-5% 1/4W	R1158	0700051	CF 5.6K OHM +-5% 1/16W
R11	0187038	CF 75 OHM +-5% 1/16W	R1159	0700052	CF 6.8K OHM +-5% 1/16W
R11	0700027	CF 100 OHM +-5% 1/16W	R1160	0700054	CF 10K OHM +-5% 1/16W
R1101	0700043	CF 1.5K OHM +-5% 1/16W	R1161	0700059	CF 27K OHM +-5% 1/16W
R1102	0700041	CF 1K OHM +-5% 1/16W	R1162	0700054	CF 10K OHM +-5% 1/16W
R1103	0700046	CF 2.7K OHM +-5% 1/16W	R1163	0700055	CF 12K OHM +-5% 1/16W
R1104	0700055	CF 12K OHM +-5% 1/16W	R1164	0700055	CF 12K OHM +-5% 1/16W
R1105	0700054	CF 10K OHM +-5% 1/16W	R1165	0700055	CF 12K OHM +-5% 1/16W
R1106	0700047	CF 3.3K OHM +-5% 1/16W	R1166	0700056	CF 15K OHM +-5% 1/16W
R1107	0700054	CF 10K OHM +-5% 1/16W	R1167	0700041	CF 1K OHM +-5% 1/16W
R1108	0700039	CF 820 OHM +-5% 1/16W	R1168	0700041	CF 1K OHM +-5% 1/16W
R1109	0700054	CF 10K OHM +-5% 1/16W	R1169	0700041	CF 1K OHM +-5% 1/16W
R1110	0700047	CF 3.3K OHM +-5% 1/16W	R1170	0700053	CF 8.2K OHM +-5% 1/16W
R1111	0700054	CF 10K OHM +-5% 1/16W	R1171	0700055	CF 12K OHM +-5% 1/16W
R1112	0110133	MF 330 OHM +-5% 1W	R1172	0700042	CF 1.2K OHM +-5% 1/16W
R1113	0700053	CF 8.2K OHM +-5% 1/16W	R1173	0700055	CF 12K OHM +-5% 1/16W
R1114	0700054	CF 10K OHM +-5% 1/16W	R1174	0700057	CF 18K OHM +-5% 1/16W
R1115	0700044	CF 1.8K OHM +-5% 1/16W	R1175	0700055	CF 12K OHM +-5% 1/16W
R1116	0700044	CF 1.8K OHM +-5% 1/16W	R1176	0700054	CF 10K OHM +-5% 1/16W
R1117	0700047	CF 3.3K OHM +-5% 1/16W	R1177	0700056	CF 15K OHM +-5% 1/16W
R1118	0700058	CF 22K OHM +-5% 1/16W	R1178	0700058	CF 22K OHM +-5% 1/16W
R1119	0700058	CF 22K OHM +-5% 1/16W	R1179	0700058	CF 22K OHM +-5% 1/16W
R1120	0700041	CF 1K OHM +-5% 1/16W	R1180	0700054	CF 10K OHM +-5% 1/16W
R1122	0700041	CF 1K OHM +-5% 1/16W	R1181	0700054	CF 10K OHM +-5% 1/16W
R1123	0700041	CF 1K OHM +-5% 1/16W	R1182	0700054	CF 10K OHM +-5% 1/16W
R1124	0700041	CF 1K OHM +-5% 1/16W	R1183	0700058	CF 22K OHM +-5% 1/16W
R1125	0700027	CF 100 OHM +-5% 1/16W	R1184	0700058	CF 22K OHM +-5% 1/16W
R1126	0700041	CF 1K OHM +-5% 1/16W	R1185	0700058	CF 22K OHM +-5% 1/16W
R1127	0700041	CF 1K OHM +-5% 1/16W	R1186	0700054	CF 10K OHM +-5% 1/16W
R1131	0700058	CF 22K OHM +-5% 1/16W	R1187	0700045	CF 2.2K OHM +-5% 1/16W
R1132	0700058	CF 22K OHM +-5% 1/16W	R1188	0700049	CF 4.7K OHM +-5% 1/16W
R1133	0700057	CF 18K OHM +-5% 1/16W	R1189	0700051	CF 5.6K OHM +-5% 1/16W
R1134	0700045	CF 2.2K OHM +-5% 1/16W	R1190	0700051	CF 5.6K OHM +-5% 1/16W
R1135	0700054	CF 10K OHM +-5% 1/16W	R1191	0700043	CF 1.5K OHM +-5% 1/16W
R1136	0700066	CF 82K OHM +-5% 1/16W	R1192	0700062	CF 39K OHM +-5% 1/16W
R1137	0700047	CF 3.3K OHM +-5% 1/16W	R1193	0700046	CF 2.7K OHM +-5% 1/16W
R1138	0700057	CF 18K OHM +-5% 1/16W	R1194	0700054	CF 10K OHM +-5% 1/16W
R1139	0700045	CF 2.2K OHM +-5% 1/16W	R1195	0700041	CF 1K OHM +-5% 1/16W
R1140	0700054	CF 10K OHM +-5% 1/16W	R1196	0700041	CF 1K OHM +-5% 1/16W
R1141	0700066	CF 82K OHM +-5% 1/16W	R1197	0700041	CF 1K OHM +-5% 1/16W
R1142	0700047	CF 3.3K OHM +-5% 1/16W	R1198	0700041	CF 1K OHM +-5% 1/16W
R1143	0100121	CF 220K OHM +-5% 1/8W	R1199	0100065	CF 1K OHM +-5% 1/8W
R1144	0700055	CF 12K OHM +-5% 1/16W	R12	0700054	CF 10K OHM +-5% 1/16W
R1146	0700062	CF 39K OHM +-5% 1/16W	R1200	0700041	CF 1K OHM +-5% 1/16W
R1147	0700062	CF 39K OHM +-5% 1/16W	R1201	0700041	CF 1K OHM +-5% 1/16W
R1148	0110263	MF 5.6K OHM +-5% 2W	R1202	0700041	CF 1K OHM +-5% 1/16W
R1149	0700053	CF 8.2K OHM +-5% 1/16W	R1203	0700041	CF 1K OHM +-5% 1/16W
R1150	0700056	CF 15K OHM +-5% 1/16W	R1204	0700041	CF 1K OHM +-5% 1/16W
R1151	0700054	CF 10K OHM +-5% 1/16W	R1205	0700041	CF 1K OHM +-5% 1/16W
R1152	0700051	CF 5.6K OHM +-5% 1/16W	R1206	0700045	CF 2.2K OHM +-5% 1/16W
R1153	0187096	CF 20K OHM +-5% 1/16W	R1207	0700045	CF 2.2K OHM +-5% 1/16W
R1154	0700051	CF 5.6K OHM +-5% 1/16W	R1208	0700051	CF 5.6K OHM +-5% 1/16W

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
R1210	0100071	CF 1.8K OHM +-5% 1/8W	R206	0700047	CF 3.3K OHM +-5% 1/16W
R1211	0100041	CF 100 OHM +-5% 1/8W	R207	0700044	CF 1.8K OHM +-5% 1/16W
R1212	0700043	CF 1.5K OHM +-5% 1/16W	R207	0700067	CF 100K OHM +-5% 1/16W
R1213	0700027	CF 100 OHM +-5% 1/16W	R208	0700027	CF 100 OHM +-5% 1/16W
R1214	0700027	CF 100 OHM +-5% 1/16W	R209	0700034	CF 330 OHM +-5% 1/16W
R1215	0700027	CF 100 OHM +-5% 1/16W	R21	0700054	CF 10K OHM +-5% 1/16W
R1218	0700049	CF 4.7K OHM +-5% 1/16W	R210	0700037	CF 560 OHM +-5% 1/16W
R1221	0700058	CF 22K OHM +-5% 1/16W	R211	0700032	CF 220 OHM +-5% 1/16W
R1222	0700058	CF 22K OHM +-5% 1/16W	R213	0100123	CF 270K OHM +-5% 1/8W
R1223	0700058	CF 22K OHM +-5% 1/16W	R220A	0100085	CF 6.8K OHM +-5% 1/8W
R1224	0700058	CF 22K OHM +-5% 1/16W	R251	0700025	CF 68 OHM +-5% 1/16W
R1230	0700019	CF 27 OHM +-5% 1/16W	R252	0700047	CF 3.3K OHM +-5% 1/16W
R1231	0700019	CF 27 OHM +-5% 1/16W	R253	0700037	CF 560 OHM +-5% 1/16W
R1232	0700019	CF 27 OHM +-5% 1/16W	R254	0700034	CF 330 OHM +-5% 1/16W
R1233	0700054	CF 10K OHM +-5% 1/16W	R255	0700037	CF 560 OHM +-5% 1/16W
R1234	0700064	CF 56K OHM +-5% 1/16W	R256	0700018	CF 22 OHM +-5% 1/6W
R1240	0700048	CF 3.9K OHM +-5% 1/16W	R257	0700041	CF 1K OHM +-5% 1/16W
R1241	0700048	CF 3.9K OHM +-5% 1/16W	R258	0100059	CF 560 OHM +-5% 1/8W
R1247	0700029	CF 150 OHM +-5% 1/16W	R259	0100059	CF 560 OHM +-5% 1/8W
R1250	0700042	CF 1.2K OHM +-5% 1/16W	R260	0700041	CF 1K OHM +-5% 1/16W
R1251	0100041	CF 100 OHM +-5% 1/8W	R261	0700054	CF 10K OHM +-5% 1/16W
R1252	0100079	CF 3.9K OHM +-5% 1/8W	R262	0700041	CF 1K OHM +-5% 1/16W
R1253	0100127	CF 390K OHM +-5% 1/8W	R263	0700054	CF 10K OHM +-5% 1/16W
R13	0187038	CF 75 OHM +-5% 1/16W	R264	0700025	CF 68 OHM +-5% 1/16W
R13	0700067	CF 100K OHM +-5% 1/16W	R265	0700025	CF 68 OHM +-5% 1/16W
R1337	0700041	CF 1K OHM +-5% 1/16W	R266	0700041	CF 1K OHM +-5% 1/16W
R1346	0700027	CF 100 OHM +-5% 1/16W	R267	0700045	CF 2.2K OHM +-5% 1/16W
R1370	0700041	CF 1K OHM +-5% 1/16W	R268	0700048	CF 3.9K OHM +-5% 1/16W
R1371	0700041	CF 1K OHM +-5% 1/16W	R269	0700037	CF 560 OHM +-5% 1/16W
R1372	0700027	CF 100 OHM +-5% 1/16W	R270	0700018	CF 22 OHM +-5% 1/6W
R1373	0700027	CF 100 OHM +-5% 1/16W	R271	0700033	CF 270 OHM +-5% 1/16W
R1374	0100059	CF 560 OHM +-5% 1/8W	R272	0150158	VR 30K OHM-B RV-6
R1374	0700063	CF 47K OHM +-5% 1/16W	R274	0700054	CF 10K OHM +-5% 1/16W
R1375	0700042	CF 1.2K OHM +-5% 1/16W	R275	0700034	CF 330 OHM +-5% 1/16W
R1376	0187062	CF 750 OHM +-5% 1/16W	R281	0700027	CF 100 OHM +-5% 1/16W
R1377	0700037	CF 560 OHM +-5% 1/16W	R282	0700036	CF 470 OHM +-5% 1/16W
R1378	0700057	CF 18K OHM +-5% 1/16W	R283	0700031	CF 180 OHM +-5% 1/16W
R1379	0114147	CF 470 OHM +-5% 1/4W	R284	0700033	CF 270 OHM +-5% 1/16W
R14	0187038	CF 75 OHM +-5% 1/16W	R286	0700063	CF 47K OHM +-5% 1/16W
R14	0700067	CF 100K OHM +-5% 1/16W	R298	0700045	CF 2.2K OHM +-5% 1/16W
R15	0100041	CF 100 OHM +-5% 1/8W	R299	0700054	CF 10K OHM +-5% 1/16W
R15	0700032	CF 220 OHM +-5% 1/16W	R3001	0700058	CF 22K OHM +-5% 1/16W
R16	0100041	CF 100 OHM +-5% 1/8W	R3002	0700063	CF 47K OHM +-5% 1/16W
R16	0700027	CF 100 OHM +-5% 1/16W	R3003	0700058	CF 22K OHM +-5% 1/16W
R17	0700027	CF 100 OHM +-5% 1/16W	R3004	0700058	CF 22K OHM +-5% 1/16W
R18	0700027	CF 100 OHM +-5% 1/16W	R3005	0700063	CF 47K OHM +-5% 1/16W
R20	0700054	CF 10K OHM +-5% 1/16W	R3006	0700058	CF 22K OHM +-5% 1/16W
R201	0700041	CF 1K OHM +-5% 1/16W	R3007	0700039	CF 820 OHM +-5% 1/16W
R202	0700041	CF 1K OHM +-5% 1/16W	R3008	0700039	CF 820 OHM +-5% 1/16W
R202	0700051	CF 5.6K OHM +-5% 1/16W	R3009	0700044	CF 1.8K OHM +-5% 1/16W
R203	0700027	CF 100 OHM +-5% 1/16W	R3010	0700045	CF 2.2K OHM +-5% 1/16W
R203	0700063	CF 47K OHM +-5% 1/16W	R3011	0700064	CF 56K OHM +-5% 1/16W
R204	0100121	CF 220K OHM +-5% 1/8W	R3012	0700041	CF 1K OHM +-5% 1/16W
R205	0700067	CF 100K OHM +-5% 1/16W	R3013	0700045	CF 2.2K OHM +-5% 1/16W
R206	0100115	CF 120K OHM +-5% 1/8W	R3016	0700064	CF 56K OHM +-5% 1/16W

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
R3017	0700041	CF 1K OHM +-5% 1/16W	R3129	0187038	CF 75 OHM +-5% 1/16W
R3018	0700045	CF 2.2K OHM +-5% 1/16W	R3130	0700067	CF 100K OHM +-5% 1/16W
R3021	0700064	CF 56K OHM +-5% 1/16W	R3131	0700041	CF 1K OHM +-5% 1/16W
R3022	0700041	CF 1K OHM +-5% 1/16W	R3132	0700067	CF 100K OHM +-5% 1/16W
R3023	0700045	CF 2.2K OHM +-5% 1/16W	R3133	0700041	CF 1K OHM +-5% 1/16W
R3026	0700064	CF 56K OHM +-5% 1/16W	R3134	0700067	CF 100K OHM +-5% 1/16W
R3027	0700041	CF 1K OHM +-5% 1/16W	R3135	0700034	CF 330 OHM +-5% 1/16W
R3028	0700045	CF 2.2K OHM +-5% 1/16W	R3136	0113719	CF 56 OHM +-5% 1/2W
R3039	0700027	CF 100 OHM +-5% 1/16W	R3137	0187038	CF 75 OHM +-5% 1/16W
R3040	0700065	CF 68K OHM +-5% 1/16W	R3138	0700067	CF 100K OHM +-5% 1/16W
R3041	0700065	CF 68K OHM +-5% 1/16W	R3139	0700034	CF 330 OHM +-5% 1/16W
R3045	0187038	CF 75 OHM +-5% 1/16W	R3140	0100047	CF 180 OHM +-5% 1/8W
R3046	0700027	CF 100 OHM +-5% 1/16W	R3141	0187038	CF 75 OHM +-5% 1/16W
R3047	0100123	CF 270K OHM +-5% 1/8W	R3142	0700067	CF 100K OHM +-5% 1/16W
R3048	0700065	CF 68K OHM +-5% 1/16W	R3159	0700064	CF 56K OHM +-5% 1/16W
R3049	0100123	CF 270K OHM +-5% 1/8W	R3160	0700041	CF 1K OHM +-5% 1/16W
R3050	0700065	CF 68K OHM +-5% 1/16W	R3167	0110121	MF 100 OHM +-5% 1W
R3051	0187038	CF 75 OHM +-5% 1/16W	R3170	0700054	CF 10K OHM +-5% 1/16W
R3052	0700027	CF 100 OHM +-5% 1/16W	R3171	0700054	CF 10K OHM +-5% 1/16W
R3053	0100123	CF 270K OHM +-5% 1/8W	R3174	0700027	CF 100 OHM +-5% 1/16W
R3054	0700065	CF 68K OHM +-5% 1/16W	R320	0700027	CF 100 OHM +-5% 1/16W
R3055	0100123	CF 270K OHM +-5% 1/8W	R3201	0114147	CF 470 OHM +-5% 1/4W
R3056	0700065	CF 68K OHM +-5% 1/16W	R3202	0700067	CF 100K OHM +-5% 1/16W
R3057	0100041	CF 100 OHM +-5% 1/8W	R3203	0700061	CF 33K OHM +-5% 1/16W
R3058	0100109	CF 68K OHM +-5% 1/8W	R3204	0700067	CF 100K OHM +-5% 1/16W
R3059	0100109	CF 68K OHM +-5% 1/8W	R3204A	0100117	CF 150K OHM +-5% 1/8W
R3060	0187038	CF 75 OHM +-5% 1/16W	R3205	0700042	CF 1.2K OHM +-5% 1/16W
R3061	0700027	CF 100 OHM +-5% 1/16W	R3207	0700048	CF 3.9K OHM +-5% 1/16W
R3062	0187038	CF 75 OHM +-5% 1/16W	R3208	0700048	CF 3.9K OHM +-5% 1/16W
R3063	0700027	CF 100 OHM +-5% 1/16W	R3209	0700051	CF 5.6K OHM +-5% 1/16W
R3064	0187038	CF 75 OHM +-5% 1/16W	R321	0700036	CF 470 OHM +-5% 1/16W
R3065	0700027	CF 100 OHM +-5% 1/16W	R321	0700049	CF 4.7K OHM +-5% 1/16W
R3066	0187038	CF 75 OHM +-5% 1/16W	R3210	0700027	CF 100 OHM +-5% 1/16W
R3067	0700027	CF 100 OHM +-5% 1/16W	R3211	0700027	CF 100 OHM +-5% 1/16W
R3068	0100041	CF 100 OHM +-5% 1/8W	R3212	0700045	CF 2.2K OHM +-5% 1/16W
R3069	0100041	CF 100 OHM +-5% 1/8W	R3213	0700045	CF 2.2K OHM +-5% 1/16W
R3074	0700041	CF 1K OHM +-5% 1/16W	R3215	0700051	CF 5.6K OHM +-5% 1/16W
R3075	0700041	CF 1K OHM +-5% 1/16W	R3216	0100117	CF 150K OHM +-5% 1/8W
R308	0700027	CF 100 OHM +-5% 1/16W	R3217	0700039	CF 820 OHM +-5% 1/16W
R3091	0700049	CF 4.7K OHM +-5% 1/16W	R3218	0700049	CF 4.7K OHM +-5% 1/16W
R3101	0700037	CF 560 OHM +-5% 1/16W	R3219	0700049	CF 4.7K OHM +-5% 1/16W
R3102	0100121	CF 220K OHM +-5% 1/8W	R322	0700059	CF 27K OHM +-5% 1/16W
R3103	0114163	CF 1.2K OHM +-5% 1/4W	R3220	0100125	CF 330K OHM +-5% 1/8W
R3104	0700045	CF 2.2K OHM +-5% 1/16W	R3221	0700051	CF 5.6K OHM +-5% 1/16W
R3105	0700037	CF 560 OHM +-5% 1/16W	R3222	0700051	CF 5.6K OHM +-5% 1/16W
R3106	0100121	CF 220K OHM +-5% 1/8W	R3224	0700058	CF 22K OHM +-5% 1/16W
R3107	0114163	CF 1.2K OHM +-5% 1/4W	R3225	0700054	CF 10K OHM +-5% 1/16W
R3108	0700045	CF 2.2K OHM +-5% 1/16W	R3226	0700054	CF 10K OHM +-5% 1/16W
R3109	0700037	CF 560 OHM +-5% 1/16W	R3227	0700027	CF 100 OHM +-5% 1/16W
R3110	0100121	CF 220K OHM +-5% 1/8W	R3228	0700041	CF 1K OHM +-5% 1/16W
R3111	0114163	CF 1.2K OHM +-5% 1/4W	R323	0700066	CF 82K OHM +-5% 1/16W
R3112	0700045	CF 2.2K OHM +-5% 1/16W	R3232	01195051	FR 2.2 OHM +-5% 1/4W
R312	0700054	CF 10K OHM +-5% 1/16W	R3235	0700041	CF 1K OHM +-5% 1/16W
R3127	0700034	CF 330 OHM +-5% 1/16W	R3236	0700041	CF 1K OHM +-5% 1/16W
R3128	0114133	CF 120 OHM +-5% 1/4W	R3236A	0700041	CF 1K OHM +-5% 1/16W

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
R3237	0700059	CF 27K OHM +-5% 1/16W	R3924	0700063	CF 47K OHM +-5% 1/16W
R3239	0700067	CF 100K OHM +-5% 1/16W	R3925	0700034	CF 330 OHM +-5% 1/16W
R324	0700049	CF 4.7K OHM +-5% 1/16W	R3926	0700058	CF 22K OHM +-5% 1/16W
R3243	0700037	CF 560 OHM +-5% 1/16W	R3927	0700034	CF 330 OHM +-5% 1/16W
R3244	0700059	CF 27K OHM +-5% 1/16W	R3927A	0700034	CF 330 OHM +-5% 1/16W
R3330	0100053	CF 330 OHM +-5% 1/8W	R3929	0150261	VR 1KOHM B
R3331	0137559	CF 220 OHM +-5% 1/4W	R3931	0700029	CF 150 OHM +-5% 1/16W
R3332	0700067	CF 100K OHM +-5% 1/16W	R3933	0700029	CF 150 OHM +-5% 1/16W
R3333	0187038	CF 75 OHM +-5% 1/16W	R3940	0700054	CF 10K OHM +-5% 1/16W
R3334	0100107	CF 56K OHM +-5% 1/8W	R3945	0700027	CF 100 OHM +-5% 1/16W
R3335	0100107	CF 56K OHM +-5% 1/8W	R3950	0100041	CF 100 OHM +-5% 1/8W
R336	0700063	CF 47K OHM +-5% 1/16W	R3951	0100041	CF 100 OHM +-5% 1/8W
R337	0700056	CF 15K OHM +-5% 1/16W	R3952	0100041	CF 100 OHM +-5% 1/8W
R338	0100059	CF 560 OHM +-5% 1/8W	R3955	0700027	CF 100 OHM +-5% 1/16W
R339	0100059	CF 560 OHM +-5% 1/8W	R3956	0100041	CF 100 OHM +-5% 1/8W
R345	0100127	CF 390K OHM +-5% 1/8W	R3957	0100041	CF 100 OHM +-5% 1/8W
R346	0700049	CF 4.7K OHM +-5% 1/16W	R3958	0100041	CF 100 OHM +-5% 1/8W
R347	0700052	CF 6.8K OHM +-5% 1/16W	R3960	0100089	CF 10K OHM +-5% 1/8W
R348	0100067	CF 1.2K OHM +-5% 1/8W	R3961	0100115	CF 120K OHM +-5% 1/8W
R350	0700052	CF 6.8K OHM +-5% 1/16W	R3962	0700027	CF 100 OHM +-5% 1/16W
R3501	0700032	CF 220 OHM +-5% 1/16W	R3963	0700027	CF 100 OHM +-5% 1/16W
R351	0700057	CF 18K OHM +-5% 1/16W	R3964	0700027	CF 100 OHM +-5% 1/16W
R352	0700033	CF 270 OHM +-5% 1/16W	R3965	0700032	CF 220 OHM +-5% 1/16W
R353	0700044	CF 1.8K OHM +-5% 1/16W	R3966	0700032	CF 220 OHM +-5% 1/16W
R354	0700047	CF 3.3K OHM +-5% 1/16W	R3967	0700032	CF 220 OHM +-5% 1/16W
R355	0114143	CF 330 OHM +-5% 1/4W	R3970	0700024	CF 56 OHM +-5% 1/16W
R356	0114143	CF 330 OHM +-5% 1/4W	R3971	0700047	CF 3.3K OHM +-5% 1/16W
R357	0114143	CF 330 OHM +-5% 1/4W	R3973	0700054	CF 10K OHM +-5% 1/16W
R358	0700027	CF 100 OHM +-5% 1/16W	R3974	0700041	CF 1K OHM +-5% 1/16W
R359	0700027	CF 100 OHM +-5% 1/16W	R3980	0700027	CF100 OHM +-5% 1/16W
R360	0700027	CF 100 OHM +-5% 1/16W	R3981	0700045	CF 2.2K OHM +-5% 1/16W
R361	0700054	CF 10K OHM +-5% 1/16W	R3982	0700045	CF 2.2K OHM +-5% 1/16W
R363	0700041	CF 1K OHM +-5% 1/16W	R3984	0700047	CF 3.3K OHM +-5% 1/16W
R365	0700027	CF 100 OHM +-5% 1/16W	R3985	0700027	CF 100 OHM +-5% 1/16W
R370	0700056	CF 15K OHM +-5% 1/16W	R3986	0700036	CF 470 OHM +-5% 1/16W
R371	0700056	CF 15K OHM +-5% 1/16W	R3987	0700027	CF 100 OHM +-5% 1/16W
R380	0700027	CF 100 OHM +-5% 1/16W	R3990	0700027	CF 100 OHM +-5% 1/16W
R380	0700041	CF 1K OHM +-5% 1/16W	R3999	0700031	CF 180 OHM +-5% 1/16W
R381	0700034	CF 330 OHM +-5% 1/16W	R40	0114149	CF 560 OHM +-5% 1/4W
R382	0700041	CF 1K OHM +-5% 1/16W	R401	0700042	CF 1.2K OHM +-5% 1/16W
R383	0700038	CF 680 OHM +-5% 1/16W	R403	0700027	CF 100 OHM +-5% 1/16W
R384	0700038	CF 680 OHM +-5% 1/16W	R403A	0150136	VR 5K OHM-B
R390	0100041	CF 100 OHM +-5% 1/8W	R405	0700027	CF 100 OHM +-5% 1/16W
R390	0700027	CF 100 OHM +-5% 1/16W	R406	0700041	CF 1K OHM +-5% 1/16W
R3901	0700027	CF 100 OHM +-5% 1/16W	R407	0700027	CF 100 OHM +-5% 1/16W
R3903	0700041	CF 1K OHM +-5% 1/16W	R408	0700064	56K OHM +-5% 1/16W
R3904	0700043	CF 1.5K OHM +-5% 1/16W	R409	0700047	3.3K OHM +-5% 1/16W
R3905	0700054	CF 10K OHM +-5% 1/16W	R410	0700059	CF 27K OHM +-5% 1/16W
R3906	0700067	CF 100K OHM +-5% 1/16W	R411	0100057	CF 470 OHM +-5% 1/8W
R3912	0150275	VR 10K OHM-B	R424	0700041	CF 1K OHM +-5% 1/16W
R3915	0150275	VR 10K OHM-B	R425	0700041	CF 1K OHM +-5% 1/16W
R3918	0150275	VR 10K OHM-B	R4501	0700027	CF 100 OHM +-5% 1/16W
R3920	0700029	CF 150 OHM +-5% 1/16W	R4502	0700027	CF 100 OHM +-5% 1/16W
R3921	0700027	CF 100 OHM +-5% 1/16W	R4503	0700027	CF 100 OHM +-5% 1/16W
R3923	0700027	CF 100 OHM +-5% 1/16W	R4504	0700038	CF 680 OHM +-5% 1/16W

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
R4506	0100073	CF 2.2K OHM +-5% 1/8W	R478	0700063	CF 47K OHM +-5% 1/16W
R4507	0700041	CF 1K OHM +-5% 1/16W	R4801	0700054	CF 10K OHM +-5% 1/16W
R4508	0700027	CF 100 OHM +-5% 1/16W	R4802	0700067	CF 100K OHM +-5% 1/16W
R4509	0700027	CF 100 OHM +-5% 1/16W	R4803	0700063	CF 47K OHM +-5% 1/16W
R4510	0100127	CF 390K OHM +-5% 1/8W	R4805	0700063	CF 47K OHM +-5% 1/16W
R4511	0700054	CF 10K OHM +-5% 1/16W	R4806	0700054	CF 10K OHM +-5% 1/16W
R4512	0100105	CF 47K OHM +-5% 1/8W	R4807	0700054	CF 10K OHM +-5% 1/16W
R4513	0700039	CF 820 OHM +-5% 1/16W	R4808	0700063	CF 47K OHM +-5% 1/16W
R4514	0700061	CF 33K OHM +-5% 1/16W	R4809	0700063	CF 47K OHM +-5% 1/16W
R4515	0700039	CF 820 OHM +-5% 1/16W	R4810	0700067	CF 100K OHM +-5% 1/16W
R4516	0700061	CF 33K OHM +-5% 1/16W	R4811	0700054	CF 10K OHM +-5% 1/16W
R4517	0100111	CF 82K OHM +-5% 1/8W	R4812	0700054	CF 10K OHM +-5% 1/16W
R4518	0700063	CF 47K OHM +-5% 1/16W	R4813	0700054	CF 10K OHM +-5% 1/16W
R4519	0100111	CF 82K OHM +-5% 1/8W	R482	0700034	CF 330 OHM +-5% 1/16W
R4520	0100017	CF 10 OHM +-5% 1/8W	R4820	0100041	CF 100 OHM +-5% 1/8W
R4521	0100017	CF 10 OHM +-5% 1/8W	R4821	0100041	CF 100 OHM +-5% 1/8W
R4522	0700041	CF 1K OHM +-5% 1/16W	R483	0700045	CF 2.2K OHM +-5% 1/16W
R4523	0700041	CF 1K OHM +-5% 1/16W	R484	0700052	CF 6.8K OHM +-5% 1/16W
R4524	0700064	CF 56K OHM +-5% 1/16W	R485	0700047	CF 3.3K OHM +-5% 1/16W
R4525	0700056	CF 15K OHM +-5% 1/16W	R4850	0114137	CF 180 OHM +-5% 1/4W
R4526	0100051	CF 270 OHM +-5% 1/8W	R486	0700067	CF 100K OHM +-5% 1/16W
⚠R4527	01195051	FR 2.2 OHM +-5% 1/4W	R487	0700067	CF 100K OHM +-5% 1/16W
R4528	0700041	CF 1K OHM +-5% 1/16W	R488	0700027	CF 100 OHM +-5% 1/16W
R4530	0700029	CF 150 OHM +-5% 1/16W	R489	0700043	CF 1.5K OHM +-5% 1/16W
R4531	0700041	CF 1K OHM +-5% 1/16W	R499	0700064	CF 56K OHM +-5% 1/16W
R4533	0700041	CF 1K OHM +-5% 1/16W	R50	0700054	CF 10K OHM +-5% 1/16W
R4534	0700042	CF 1.2K OHM +-5% 1/16W	R5001	0700053	CF 8.2K OHM +-5% 1/16W
R4535	0700051	CF 5.6K OHM +-5% 1/16W	R5002	0700039	CF 820 OHM +-5% 1/16W
R4536	0700042	CF 1.2K OHM +-5% 1/16W	R5002	0700041	CF 1K OHM +-5% 1/16W
R4537	0700018	CF 22 OHM +-5% 1/6W	R5003	0700041	CF 1K OHM +-5% 1/16W
R4538	0700018	CF 22 OHM +-5% 1/6W	R5003	0700044	CF 1.8K OHM +-5% 1/16W
R4539	01195051	FR 2.2 OHM +-5% 1/4W	R5004	0700039	CF 820 OHM +-5% 1/16W
R4540	0700047	CF 3.3K OHM +-5% 1/16W	R5004	0700064	CF 56K OHM +-5% 1/16W
R4541	0114161	CF 1K OHM +-5% 1/4W	R5005	0150156	VR 10K OHM-B RV-6
R4542	01195051	FR 2.2 OHM +-5% 1/4W	R5005	0700038	CF 680 OHM +-5% 1/16W
R4543	0700047	CF 3.3K OHM +-5% 1/16W	R5006	0114137	CF 180 OHM +-5% 1/4W
R4544	0114161	CF 1K OHM +-5% 1/4W	R5006	0700056	CF 15K OHM +-5% 1/16W
⚠R4545	01195051	FR 2.2 OHM +-5% 1/4W	R5007	0700052	CF 6.8K OHM +-5% 1/16W
R4546	0700047	CF 3.3K OHM +-5% 1/16W	R5007	0700063	CF 47K OHM +-5% 1/16W
R4547	0114161	CF 1K OHM +-5% 1/4W	R5008	0150137	VR 10K OHM-B
R4548	0700055	CF 12K OHM +-5% 1/16W	R5008	0700041	CF 1K OHM +-5% 1/16W
R4549	0700066	CF 82K OHM +-5% 1/16W	R5009	0700041	CF 1K OHM +-5% 1/16W
R4550	0700033	CF 270 OHM +-5% 1/16W	R5009	0700054	CF 10K OHM +-5% 1/16W
R4551	0700033	CF 270 OHM +-5% 1/16W	R501	0700043	CF 1.5K OHM +-5% 1/16W
R4552	0700033	CF 270 OHM +-5% 1/16W	R5010	0150224	VR 1M OHM-B
R4553	0700033	CF 270 OHM +-5% 1/16W	R5010	0700063	CF 47K OHM +-5% 1/16W
R4554	0119514	FR 10 OHM +-5% 1/4W	R5011	0700027	CF 100 OHM +-5% 1/16W
R4555	0700061	CF 33K OHM +-5% 1/16W	R5011	0700054	CF 10K OHM +-5% 1/16W
R471	0700064	CF 56K OHM +-5% 1/16W	R5012	0700037	CF 560 OHM +-5% 1/16W
R472	0700027	CF 100 OHM +-5% 1/16W	R5012	0700045	CF 2.2K OHM +-5% 1/16W
R473	0700041	CF 1K OHM +-5% 1/16W	R5013	0700041	CF 1K OHM +-5% 1/16W
R474	0700054	CFCF 10K OHM +-5% 1/16W	R5013	0700055	CF 12K OHM +-5% 1/16W
R475	0700054	CF 10K OHM +-5% 1/16W	R5014	0700037	CF 560 OHM +-5% 1/16W
R476	0700064	CF 56K OHM +-5% 1/16W	R5014	0700043	CF 1.5K OHM +-5% 1/16W
R477	0700063	CF 47K OHM +-5% 1/16W	R5015	0150111	VR 1K OHM-B

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
R5015	0700043	CF 1.5K OHM +-5% 1/16W	R5060	0700061	CF 33K OHM +-5% 1/16W
R5016	0700037	CF 560 OHM +-5% 1/16W	R5065	0700058	CF 22K OHM +-5% 1/16W
R5016	0700043	CF 1.5K OHM +-5% 1/16W	R507	0700027	CF 100 OHM +-5% 1/16W
R5017	0700039	CF 820 OHM +-5% 1/16W	R508	0700063	CF 47K OHM +-5% 1/16W
R5017	0700058	CF 22K OHM +-5% 1/16W	R509	0700054	CF 10K OHM +-5% 1/16W
R5017B	0700054	CF 10K OHM +-5% 1/16W	R51	0700054	CF 10K OHM +-5% 1/16W
R5018	0150110	VR 500 OHM-B	R510	0150153	VR 2K OHM B
R5018	0700054	CF 10K OHM +-5% 1/16W	R510	0700054	CF 10K OHM +-5% 1/16W
R5019	0700041	CF 1K OHM +-5% 1/16W	R511	0179563	MG 3.3M OHM +-5% 1/8W
R502	0700037	CF 560 OHM +-5% 1/16W	R511	0700054	CF 10K OHM +-5% 1/16W
R5020	0700034	CF 330 OHM +-5% 1/16W	R512	0700048	CF 3.9K OHM +-5% 1/16W
R5021	0150135	VR 1K OHM-B	R512	0700056	CF 15K OHM +-5% 1/16W
R5021	0700041	CF 1K OHM +-5% 1/16W	R513	0700048	CF 3.9K OHM +-5% 1/16W
R5022	0100133	CF 680K OHM +-5% 1/8W	R514	0700058	CF 22K OHM +-5% 1/16W
R5022	0150112	VR 2K OHM-B	R515	0179536	MG 1M OHM +-5% 1/8W
R5023	0700035	CF 390 OHM +-5% 1/16W	R516	0700037	CF 560 OHM +-5% 1/16W
R5024	0700031	CF 180 OHM +-5% 1/16W	R517	0150157	VR 200K OHM-B RV-6
R5025	0700032	CF 220 OHM +-5% 1/16W	R518	0700043	CF 1.5K OHM +-5% 1/16W
R5026	0700054	CF 10K OHM +-5% 1/16W	R519	0700067	CF 100K OHM +-5% 1/16W
R5027	0700024	CF 56 OHM +-5% 1/16W	R520	0700067	CF 100K OHM +-5% 1/16W
R5027	0700044	CF 1.8K OHM +-5% 1/16W	R521	0700041	CF 1K OHM +-5% 1/16W
R5028	0700042	CF 1.2K OHM +-5% 1/16W	R522	0700045	CF 2.2K OHM +-5% 1/16W
R5029	0700045	CF 2.2K OHM +-5% 1/16W	R523	0700041	CF 1K OHM +-5% 1/16W
R503	0700027	CF 100 OHM +-5% 1/16W	R524	0700045	CF 2.2K OHM +-5% 1/16W
R5030	0700022	CF 39 OHM +-5% 1/16W	R525	0700056	CF 15K OHM +-5% 1/16W
R5030	0700052	CF 6.8K OHM +-5% 1/16W	R526	0700052	CF 6.8K OHM +-5% 1/16W
R5031	0700022	CF 39 OHM +-5% 1/16W	R527	0700041	CF 1K OHM +-5% 1/16W
R5031	0700049	CF 4.7K OHM +-5% 1/16W	R528	0700061	CF 33K OHM +-5% 1/16W
R5032	0700022	CF 39 OHM +-5% 1/16W	R529	0700045	CF 2.2K OHM +-5% 1/16W
R5032	0700027	CF 100 OHM +-5% 1/16W	R530	0700045	CF 2.2K OHM +-5% 1/16W
R5033	0700027	CF 100 OHM +-5% 1/16W	R531	0700063	CF 47K OHM +-5% 1/16W
R5033	0700058	CF 22K OHM +-5% 1/16W	R532	0700056	CF 15K OHM +-5% 1/16W
R5034	0700041	CF 1K OHM +-5% 1/16W	R533	0700056	CF 15K OHM +-5% 1/16W
R5034	0700061	CF 33K OHM +-5% 1/16W	R534	0700056	CF 15K OHM +-5% 1/16W
R5034A	0700046	CF 2.7K OHM +-5% 1/16W	R536	0700051	CF 5.6K OHM +-5% 1/16W
R5035	0700041	CF 1K OHM +-5% 1/16W	R539	0700037	CF 560 OHM +-5% 1/16W
R5038	0700064	CF 56K OHM +-5% 1/16W	R540	0700061	CF 33K OHM +-5% 1/16W
R504	0700054	CF 10K OHM +-5% 1/16W	R541	0700055	CF 12K OHM +-5% 1/16W
R5041	0700056	CF 15K OHM +-5% 1/16W	R542	0700061	CF 33K OHM +-5% 1/16W
R5042	0700047	CF 3.3K OHM +-5% 1/16W	R548	0700041	CF 1K OHM +-5% 1/16W
R5044	0700065	CF 68K OHM +-5% 1/16W	R550	0700042	CF 1.2K OHM +-5% 1/16W
R5045	0100041	CF 100 OHM +-5% 1/8W	R551	0700033	CF 270 OHM +-5% 1/16W
R505	0700054	CF 10K OHM +-5% 1/16W	R552	0100064	CF 910 OHM +-5% 1/8W
R5050	0700027	CF 100 OHM +-5% 1/16W	R560	0700059	CF 27K OHM +-5% 1/16W
R5051	0700037	CF 560 OHM +-5% 1/16W	R565	0700041	CF 1K OHM +-5% 1/16W
R5052	0700041	CF 1K OHM +-5% 1/16W	R601	0700037	CF 560 OHM +-5% 1/16W
R5052	0700057	CF 18K OHM +-5% 1/16W	R6010	0179561	MG 2.2M OHM +-5% 1/8W
R5053	0700041	CF 1K OHM +-5% 1/16W	R6013	0114161	CF 1K OHM +-5% 1/4W
R5053	0700051	CF 5.6K OHM +-5% 1/16W	R604	0700054	CF 10K OHM +-5% 1/16W
R5054	0100049	CF 220 OHM +-5% 1/8W	R610	0700055	CF 12K OHM +-5% 1/16W
R5054	0700044	CF 1.8K OHM +-5% 1/16W	R611	0700056	CF 15K OHM +-5% 1/16W
R5055	0100133	CF 680K OHM +-5% 1/8W	R612	0700058	CF 22K OHM +-5% 1/16W
R5056	0700047	CF 3.3K OHM +-5% 1/16W	R613	0700064	CF 56K OHM +-5% 1/16W
R506	0700056	CF 15K OHM +-5% 1/16W	R614	0700057	CF 18K OHM +-5% 1/16W
R506	0700067	CF 100K OHM +-5% 1/16W	R615	0113735	CF 270 OHM +-5% 1/2W

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
R616	0113692	CF 4.7 OHM +-5% 1/2W	R712	0100053	CF 330 OHM +-5% 1/8W
R617	0113688	CF 3.3 OHM +-5% 1/2W	R713	0700058	CF 22K OHM +-5% 1/16W
R618	0150280	VR 200 OHM-B	R714	0700033	CF 270 OHM +-5% 1/16W
R619	0700026	CF 82 OHM +-5% 1/16W	R715	0700051	CF 5.6K OHM +-5% 1/16W
R620	0700054	CF 10K OHM +-5% 1/16W	R716	0700048	CF 3.9K OHM +-5% 1/16W
R624	0700046	CF 2.7K OHM +-5% 1/16W	R719	0700034	CF 330 OHM +-5% 1/16W
R629	0150282	VR 500 OHM(B)	⚠R7225	0110245	MF 1K OHM +-5% 2W
R651	0700052	CF 6.8K OHM +-5% 1/16W	R7230	0113717	CF 47 OHM +-5% 1/2W
R652	0700065	CF 68K OHM +-5% 1/16W	⚠R7237	0100093	CF 15K OHM +-5% 1/8W
R655	0150284	VR 2K OHM-B	R7238	0700056	CF 15K OHM +-5% 1/16W
R656	0700066	CF 82K OHM +-5% 1/16W	R7239	0700063	CF 47K OHM +-5% 1/16W
R657	0150286	VR 5K OHM B	R724	0113762	CF 3.3K OHM +-5% 1/2W
R658	0700047	CF 3.3K OHM +-5% 1/16W	⚠R725	0110247	MF 1.2K OHM +-5% 2W
R659	0700041	CF 1K OHM +-5% 1/16W	⚠R726	0110247	MF 1.2K OHM +-5% 2W
R660	0100077	CF 3.3K OHM +-5% 1/8W	⚠R727	0119688	MF 0.22 OHM +-5% 1W
R661	0110259	MF 3.9K OHM +-5% 2W	R728	0100031	CF 39 OHM +-5% 1/8W
R662	0700067	CF 100K OHM +-5% 1/16W	R729	0114145	CF 390 OHM +-5% 1/4W
R663	0100081	CF 4.7K OHM +-5% 1/8W	R7352	0700061	CF 33K OHM +-5% 1/16W
R666	0700045	CF 2.2K OHM +-5% 1/16W	⚠R736	0100101	CF 33K OHM +-5% 1/8W
R671	0700054	CF 10K OHM +-5% 1/16W	R737	0100115	CF 120K OHM +-5% 1/8W
R672	0700051	CF 5.6K OHM +-5% 1/16W	R738	0700032	CF 220 OHM +-5% 1/16W
R673	0700064	CF 56K OHM +-5% 1/16W	R743	0700055	CF 12K OHM +-5% 1/16W
R676	0700045	CF 2.2K OHM +-5% 1/16W	R744	0700051	CF 5.6K OHM +-5% 1/16W
R677	0700067	CF 100K OHM +-5% 1/16W	R745	0113791	CF 47K OHM +-5% 1/2W
R680	0113733	CF 220 OHM +-5% 1/2W	R747	0100105	CF 47K OHM +-5% 1/8W
R681	0700059	CF 27K OHM +-5% 1/16W	⚠R748	0700042	CF 1.2K OHM +-5% 1/16W
R682	0100111	CF 82K OHM +-5% 1/8W	⚠R749	0700054	CF 10K OHM +-5% 1/16W
R683	0100097	CF 22K OHM +-5% 1/8W	R750	0700052	CF 6.8K OHM +-5% 1/16W
R695	0114169	CF 2.2K OHM +-5% 1/4W	R752	0700048	CF 3.9K OHM +-5% 1/16W
R7001	0700032	CF 220 OHM +-5% 1/16W	R753	0700043	CF 1.5K OHM +-5% 1/16W
R7002	0100133	CF 680K OHM +-5% 1/8W	R754	0700052	CF 6.8K OHM +-5% 1/16W
R7003	0700045	CF 2.2K OHM +-5% 1/16W	R755	0700056	CF 15K OHM +-5% 1/16W
R7004	0700048	CF 3.9K OHM +-5% 1/16W	R756	0113729	CF 150 OHM +-5% 1/2W
R7005	0100121	CF 220K OHM +-5% 1/8W	R761	0114131	CF 100 OHM +-5% 1/4W
R7006	0700054	CF 10K OHM +-5% 1/16W	R763	0110229	MF 220 OHM +-5% 2W
R7007	0114161	CF 1K OHM +-5% 1/4W	⚠R765	0113785	CF 27K OHM +-5% 1/2W
R7008	0700041	CF 1K OHM +-5% 1/16W	R771	0110217	MF 68 OHM +-5% 2W
R7009	0700054	CF 10K OHM +-5% 1/16W	R772	0700058	CF 22K OHM +-5% 1/16W
R701	0100065	CF 1K OHM +-5% 1/8W	R776	0700063	CF 47K OHM +-5% 1/16W
R7010	0700054	CF 10K OHM +-5% 1/16W	R779	0100107	CF 56K OHM +-5% 1/8W
R7011	0700048	CF 3.9K OHM +-5% 1/16W	R781	0147825	WW 5.6 OHM +-10% 16W
R7012	0700048	CF 3.9K OHM +-5% 1/16W	R782	0100089	CF 10K OHM +-5% 1/8W
R7014	0179561	MG 2.2M OHM +-5% 1/8W	R783	0700042	CF 1.2K OHM +-5% 1/16W
R7015	0100065	CF 1K OHM +-5% 1/8W	R784	0100113	CF 100K OHM +-5% 1/8W
R703	0110285	MF 47K OHM +-5% 2W	⚠R785	0119514	FR 10 OHM +-5% 1/4W
R704	0100041	CF 100 OHM +-5% 1/8W	R786	0100113	CF 100K OHM +-5% 1/8W
R705	0100133	CF 680K OHM +-5% 1/8W	R787	0100073	CF 2.2K OHM +-5% 1/8W
R7050	0700054	CF 10K OHM +-5% 1/16W	R788	0700048	CF 3.9K OHM +-5% 1/16W
R7051	0700054	CF 10K OHM +-5% 1/16W	R789	0100079	CF 3.9K OHM +-5% 1/8W
R7052	0700049	CF 4.7K OHM +-5% 1/16W	R791	0100065	CF 1K OHM +-5% 1/8W
R7053	0700054	CF 10K OHM +-5% 1/16W	⚠R7910	0700039	CF 820 OHM +-5% 1/16W
R706	0700051	CF 5.6K OHM +-5% 1/16W	⚠R7911	0700051	CF 5.6K OHM +-5% 1/16W
R708	0100129	CF 470K OHM +-5% 1/8W	R792	0700052	CF 6.8K OHM +-5% 1/16W
R710	0150291	VR 100K OHM-B	R793	0700045	CF 2.2K OHM +-5% 1/16W
R711	0700057	CF 18K OHM +-5% 1/16W	R795	0113729	CF 150 OHM +-5% 1/2W

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
R833	0113815	CF 470K OHM +-5% 1/2W	R940	0100091	CF 12K OHM +-5% 1/8W
R851	0110367	MF 8.2K OHM +-5% 3W	R941	0100073	CF 2.2K OHM +-5% 1/8W
R852	0110367	MF 8.2K OHM +-5% 3W	R942	0100041	CF 100 OHM +-5% 1/8W
R853	0110367	MF 8.2K OHM +-5% 3W	R943	0100089	CF 10K OHM +-5% 1/8W
R854	0113750	CF 1K OHM +-5% 1/2W	R944	0100089	CF 10K OHM +-5% 1/8W
R855	0113750	CF 1K OHM +-5% 1/2W	R946	0100001	CF 2.2 OHM +-5% 1/8W
R856	0113750	CF 1K OHM +-5% 1/2W	R947	0100001	CF 2.2 OHM +-5% 1/8W
R857	0100041	CF 100 OHM +-5% 1/8W	R948	0100001	CF 2.2 OHM +-5% 1/8W
R858	0100041	CF 100 OHM +-5% 1/8W	R949	0100001	CF 2.2 OHM +-5% 1/8W
R859	0100041	CF 100 OHM +-5% 1/8W	R950A	0110227	MF 180 OHM +-5% 2W
R860	0150109	VR 200 OHM-B RS-6	R951	0150151	VR 500 OHM-B RV-6
R861	0100041	CF 100 OHM +-5% 1/8W	R956	0110241	MF 680 OHM +-5% 2W
R862	0100049	CF 220 OHM +-5% 1/8W	R957	0700032	CF 220 OHM +-5% 1/16W
R863	0100041	CF 100 OHM +-5% 1/8W	R958	0100049	CF 220 OHM +-5% 1/8W
R864	0150109	VR 200 OHM-B RS-6	R959	0100057	CF 470 OHM +-5% 1/8W
R865	0100041	CF 100 OHM +-5% 1/8W	R960	0100099	CF 27K OHM +-5% 1/8W
R866	0150113	VR 5K OHM-B RS-6	R961	0114161	CF 1K OHM +-5% 1/4W
R867	0100055	CF 390 OHM +-5% 1/8W	⚠R965	0119508	FR 56 OHM +-5% 1/4W
R868	0150113	VR 5K OHM-B RS-6	⚠R966	0119508	FR 56 OHM +-5% 1/4W
R869	0100055	CF 390 OHM +-5% 1/8W	R967	0113795	CF 68K OHM +-5% 1/2W
R870	0150113	VR 5K OHM-B RS-6	R968	0100081	CF 4.7K OHM +-5% 1/8W
R871	0100055	CF 390 OHM +-5% 1/8W	R969	0100065	CF 1K OHM +-5% 1/8W
R874	0700051	CF 5.6K OHM +-5% 1/16W	R971	0119622	MF 4.3K OHM +-1% 1/8W
R875	0100041	CF 100 OHM +-5% 1/8W	R972	0113795	CF 68K OHM +-5% 1/2W
R877	0100041	CF 100 OHM +-5% 1/8W	R973	0114161	CF 1K OHM +-5% 1/4W
R879	0100041	CF 100 OHM +-5% 1/8W	R975	0100079	CF 3.9K OHM +-5% 1/8W
R881	0100043	CF 120 OHM +-5% 1/8W	R976	0113787	CF 33K OHM +-5% 1/2W
R883	0100041	CF 100 OHM +-5% 1/8W	R977	0194068	WW 1 OHM +-5% 2W
R885	0700049	CF 4.7K OHM +-5% 1/16W	R978	0100065	CF 1K OHM +-5% 1/8W
R886	0100043	CF 120 OHM +-5% 1/8W	⚠R980	0147620	WW 2.7OHM +-10% 7W
R901A	0141063	WW 5 OHM +-5% 8W	R983	0110341S	MF 680 OHM +-5% 3W
R901B	0141063	WW 5 OHM +-5% 8W	R985	0100077	CF 3.3K OHM +-5% 1/8W
R907	0110217	MF 68 OHM +-5% 2W	R986	0100077	CF 3.3K OHM +-5% 1/8W
R910	0113799	CF 100K OHM +-5% 1/2W	R991	0100083	CF 5.6K OHM +-5% 1/8W
R911	0113799	CF 100K OHM +-5% 1/2W	R992	0100059	CF 560 OHM +-5% 1/8W
R912	0113795	CF 68K OHM +-5% 1/2W	⚠R998	0179529	MG 10M OHM +-5% 1/2W
R913	0113799	CF 100K OHM +-5% 1/2W	⚠IC001	2004801	IC LA7920
R914	0113795	CF 68K OHM +-5% 1/2W	⚠IC01	2004141	IC MV1815-1/BA/DP
R915	0113799	CF 100K OHM +-5% 1/2W	⚠IC02	2382763	IC MSM41464-12 (MEMORY)
R916	0100001	CF 2.2 OHM +-5% 1/8W	⚠IC04	2381111	IC M6M80021L
R917	0100001	CF 2.2 OHM +-5% 1/8W	⚠IC05	2001651	IC M37202M3-550SP (MICON)
R918	0100001	CF 2.2 OHM +-5% 1/8W	IC1101	2001741	
R919	0100001	CF 2.2 OHM +-5% 1/8W	⚠IC1102	2381112	IC M6M80021P (MEMORY)
R920	0110161	MF 4.7K OHM +-5% 1W	⚠IC1303	2917611	IC LA7016
R921	0110161	MF 4.7K OHM +-5% 1W	⚠IC201	2004171	IC LA7577
R925	0110252	MF 2K OHM +-5% 2W	⚠IC281	2003361	IC LA7222 (LINEAR)
R925A	0110252	MF 2K OHM +-5% 2W	⚠IC3002	2362606	IC NJM4558D
R926	0114059	CF 56 OHM +-5% 1/4W	⚠IC3003	2003971	IC TA8747N (LINEAR)
R930	0100089	CF 10K OHM +-5% 1/8W	⚠IC301	2004931	IC MM1114XS
R931	0100089	CF 10K OHM +-5% 1/8W	⚠IC3201	2381832	IC HA11559NT
R934	0110285	MF 47K OHM +-5% 2W	⚠IC3901	23687211	IC AN5352
R935	0100033	CF 47 OHM +-5% 1/8W	⚠IC4501	2004901	IC TA8776N
R937	0110321	MF 100 OHM +-5% 3W	⚠IC4502	2004681	IC TA8218AH
R938	0100069	CF 1.5K OHM +-5% 1/8W	⚠IC4503	2362606	IC NJM4558D
R939	0100045	CF 150 OHM +-5% 1/8W	⚠IC4801	2020041	IC MM1124

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
⚠IC5001	2003781	IC HA52026SP (LINEAR)	Q315	2320635	TR 2SA673D SI 80MHZ 400MW
⚠IC501	2914733	IC HA51339SP-3	Q316	2320635	TR 2SA673D SI 80MHZ 400MW
⚠IC502	2917611	IC LA7016	Q317	2320635	TR 2SA673D SI 80MHZ 400MW
⚠IC601	2917361	IC UPC1498H	Q3201	2324611	TR 2SD882 Q/P
⚠IC651	2380651	IC AN5551	Q3202	2327773	TR 2SC3413 (C)/(D)
⚠IC7000	2370971	IC LA7950	Q3203	2327773	TR 2SC3413 (C)/(D)
⚠IC901	2913101	IC TDA4601	Q3204	2327773	TR 2SC3413 (C)/(D)
⚠IC902	2917781	IC CNX82A	Q3205	2320635	TR 2SA673D SI 80MHZ 400MW
Q01	2327772	TR 2SC3413 (B)/(C)	Q3209	2326875	TR DTC144WSTP
Q01	2327773	TR 2SC3413 (C)/(D)	Q321	2327753	TR 2SA1390 (C)/(D)
Q02	2327772	TR 2SC3413 (B)/(C)	Q322	2327773	TR 2SC3413 (C)/(D)
Q101	2323432	TR 2SC1983R/O/Y SI	Q3331	2326022	TRANSISTOR 2SC1741S Q/R
Q1101	2320595	TR 2SC458(D) SI 230MHZ 200MW	Q381	2327773	TR 2SC3413 (C)/(D)
Q1102	2327773	TR 2SC3413 (C)/(D)	Q3903	2320595	TR 2SC458(D) SI 230MHZ 200MW
Q1103	2327773	TR 2SC3413 (C)/(D)	Q3905	2320595	TR 2SC458(D) SI 230MHZ 200MW
Q1104	2327773	TR 2SC3413 (C)/(D)	Q3906	2320635	TR 2SA673D SI 80MHZ 400MW
Q1105	2327773	TR 2SC3413 (C)/(D)	Q3907	2320595	TR 2SC458(D) SI 230MHZ 200MW
Q1106	2327773	TR 2SC3413 (C)/(D)	Q3911	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q1107	2327773	TR 2SC3413 (C)/(D)	⚠Q3923	2320595	TR 2SC458(D) SI 230MHZ 200MW
Q1108	2327773	TR 2SC3413 (C)/(D)	Q3924	2320635	TR 2SA673D SI 80MHZ 400MW
Q1110	2009401R	IC PST529C	⚠Q3925	2326873	TR DTC144ES
Q1111	2327753	TR 2SA1390 (C)/(D)	Q3980	2320635	TR 2SA673D SI 80MHZ 400MW
Q1112	2327773	TR 2SC3413 (C)/(D)	Q3981	2320595	TR 2SC458(D) SI 230MHZ 200MW
Q1113	2327773	TR 2SC3413 (C)/(D)	⚠Q40	2324611	TR 2SD882 Q/P
Q1115	2327773	TR 2SC3413 (C)/(D)	Q401	2327773	TR 2SC3413 (C)/(D)
Q1301	2320945	TR 2SC1214C/D	Q402	2326873	TR DTC144ES
Q1302	2320945	TR 2SC1214C/D	Q403	2326873	TR DTC144ES
Q1313	2327773	TR 2SC3413 (C)/(D)	Q4501	2325702	TR 2SA854S Q/R
Q1314	2320635	TR 2SA673D SI 80MHZ 400MW	Q4502	2327773	TR 2SC3413 (C)/(D)
Q201	2327773	TR 2SC3413 (C)/(D)	Q4503	2327773	TR 2SC3413 (C)/(D)
Q251	2320143	TR 2SC717TM SI 1100MHZ 200MW	Q471	2327773	TR 2SC3413 (C)/(D)
Q252	2326873	TR DTC144ES	Q472	2327773	TR 2SC3413 (C)/(D)
Q253	2326873	TR DTC144ES	Q473	2327773	TR 2SC3413 (C)/(D)
Q254	2320143	TR 2SC717TM SI 1100MHZ 200MW	Q481	2327773	TR 2SC3413 (C)/(D)
Q255	2326873	TR DTC144ES	Q482	2327773	TR 2SC3413 (C)/(D)
Q281	2327773	TR 2SC3413 (C)/(D)	Q5001	2312941M	TR 2SC3413BC/1740S-QRTA
Q299	2327773	TR 2SC3413 (C)/(D)	Q5001	2327773	TR 2SC3413 (C)/(D)
Q3006	2320595	TR 2SC458(D) SI 230MHZ 200MW	Q5002	2312941M	TR 2SC3413BC/1740S-QRTA
Q3007	2320595	TR 2SC458(D) SI 230MHZ 200MW	Q5003	2312941M	TR 2SC3413BC/1740S-QRTA
Q3008	2320595	TR 2SC458(D) SI 230MHZ 200MW	Q5004	2312941M	TR 2SC3413BC/1740S-QRTA
Q3013	2326021	TR 2SC1741S	Q5005	2312941M	TR 2SC3413BC/1740S-QRTA
Q3014	2326021	TR 2SC1741S	Q5006	2312941M	TR 2SC3413BC/1740S-QRTA
Q3015	2326021	TR 2SC1741S	Q5007	2325702	TR 2SA854S Q/R
Q3018	2312941M	TR 2SC3413BC/1740S-QRTA	Q5008	2312941M	TR 2SC3413BC/1740S-QRTA
Q3019	2312941M	TR 2SC3413BC/1740S-QRTA	Q5009	2312941M	TR 2SC3413BC/1740S-QRTA
Q3020	2312941M	TR 2SC3413BC/1740S-QRTA	Q501	2320595	TR 2SC458(D) SI 230MHZ 200MW
Q303	2327773	TR 2SC3413 (C)/(D)	Q501	2327773	TR 2SC3413 (C)/(D)
Q3051	2327772	TR 2SC3413 (B)/(C)	Q5010	2327773	TR 2SC3413 (C)/(D)
Q3052	2327772	TR 2SC3413 (B)/(C)	Q5012	2320595	TR 2SC458(D) SI 230MHZ 200MW
Q3053	2327772	TR 2SC3413 (B)/(C)	Q5013	2323263	TRANSISTOR 2SD788 C/D/E
Q3054	2327772	TR 2SC3413 (B)/(C)	Q503	2327773	TR 2SC3413 (C)/(D)
Q3091	2320595	TR 2SC458(D) SI 230MHZ 200MW	Q504	2326875	TR DTC144WSTP
Q311	2320595	TR 2SC458(D) SI 230MHZ 200MW	Q505	2326875	TR DTC144WSTP
Q313	2320635	TR 2SA673D SI 80MHZ 400MW	Q5051	2327773	TR 2SC3413 (C)/(D)
Q314	2320595	TR 2SC458(D) SI 230MHZ 200MW	Q506	2327773	TR 2SC3413 (C)/(D)

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	DESCRIPTION
Q508	2327773	TR 2SC3413 (C)/(D)
Q509	2327773	TR 2SC3413 (C)/(D)
Q510	2327773	TR 2SC3413 (C)/(D)
Q510	2327773	TR 2SC3413 (C)/(D)
Q513	2326875	TR DTC144WSTP
Q6010	2326872	TR DTC114ES SI
Q6011	2326872	TR DTC114ES SI
Q651	2322223	TR 2SC2373L SI
Q652	2320595	TR 2SC458(D) SI 230MHZ 200MW
Q7000	2320595	TR 2SC458(D) SI 230MHZ 200MW
Q7001	2327773	TR 2SC3413 (C)/(D)
Q701	2327773	TR 2SC3413 (C)/(D)
Q7011	2326872	TR DTC114ES SI
Q7012	2326872	TR DTC114ES SI
Q704	2326215	TRANSISTOR 2SC3116 R/S
⚠Q705	2315273	TRANSISTOR 2SC4589-04
Q7050	2327773	TR 2SC3413 (C)/(D)
Q7051	2327773	TR 2SC3413 (C)/(D)
Q707	2320681	TR 2SA673A B/C SI 80MHZ 400MW
⚠Q708	2321112	TR 2SA778A
⚠Q709	2327773	TR 2SC3413 (C)/(D)
Q710	2325702	TR 2SA854S Q/R
Q781	2320595	TR 2SC458(D) SI 230MHZ 200MW
⚠Q7902	2323782	TR 03P2M
Q791	2327773	TR 2SC3413 (C)/(D)
Q795	2324611	TR 2SD882 Q/P
Q851	2321221	TR 2SC1514 SI 80MHZ 1.25W
⚠Q852	2327772	TR 2SC3413 (B)/(C)
Q854	2321221	TR 2SC1514 SI 80MHZ 1.25W
Q855	2327772	TR 2SC3413 (B)/(C)
⚠Q857	2321221	TR 2SC1514 SI 80MHZ 1.25W
Q858	2327772	TR 2SC3413 (B)/(C)
⚠Q901	2327844	TR 2SD1959-02
Q902	2325951R	TR BC548B
Q903	2325961	TR BC558B
Q904	2321591	TR 2SD401A(K) SI 10MHZ 20W
Q906	2326631	THYRISTOR CR5AS-8
Q907	2315591	TRANSISTOR 2SC4002
Q908	2326872	TR DTC114ES SI
Q909	2323191	TR 2SB857C/D SI 15MHZ 40W
Q910	2321351	TR 2SA836/844 D/E SI 200MHZ 300MW
Q951	2312171	TR 2SC3852
Q953	2325961	TR BC558B
Q954	2325961	TR BC558B
Q955	2320663	TR 2SC1213AC SI 80MHZ 400MW
D1101	23383211	DI 1SS270
D1102	23383211	DI 1SS270
D1103	23383211	DI 1SS270
D1105	23383211	DI 1SS270
D1106	23383211	DI 1SS270
D1108	23383211	DI 1SS270
D1109	23383211	DI 1SS270
D1110	23383211	DI 1SS270
D1112	23383211	DI 1SS270
D1117	23383211	DI 1SS270
D1118	23383211	DI 1SS270
D1119	23383211	DI 1SS270
D1120	23383211	DI 1SS270
D1121	23383211	DI 1SS270
D1123	23383211	DI 1SS270
D1124	23383211	DI 1SS270
D1125	23383211	DI 1SS270
D1127	23383211	DI 1SS270
D1128	23383211	DI 1SS270
D1129	23383211	DI 1SS270
D1130	23383211	DI 1SS270
D1134	2339691	LED SLH-56VC77F
D1135	2339691	LED SLH-56VC77F
D1136	2339692	LED SLH-56MC77F
D1140	23383211	DI 1SS270
D1141	23383211	DI 1SS270
D1142	23383211	DI 1SS270
D1155	23383211	DI 1SS270
D1300	23383211	DI 1SS270
D1304	23383211	DI 1SS270
D251	23383211	DI 1SS270
D252	23383211	DI 1SS270
D253	23383211	DI 1SS270
D254	23383211	DI 1SS270
D300T	23383211	DI 1SS270
D3006	23383211	DI 1SS270
D3007	23383211	DI 1SS270
D3008	23383211	DI 1SS270
D301	23383211	DI 1SS270
D301T	23383211	DI 1SS270
D3014	23383211	DI 1SS270
D3016	2345211M	DI ERB12-04
D3017	2345211M	DI ERB12-04
D3018	2345211M	DI ERB12-04
D3019	2345211M	DI ERB12-04
D306	23383211	DI 1SS270
D3201	23383211	DI 1SS270
D3202	23383211	DI 1SS270
D3203	23383211	DI 1SS270
D321	23383211	DI 1SS270
D3901	23383211	DI 1SS270
D3902	23383211	DI 1SS270
D3903	23383211	DI 1SS270
D4501	23383211	DI 1SS270
D4502	23383211	DI 1SS270
D4503	23383211	DI 1SS270
D4505	23383211	DI 1SS270
D4507	23383211	DI 1SS270
D4512	23383211	DI 1SS270
D4513	23383211	DI 1SS270
D50	23383211	DI 1SS270
D5002	23383211	DI 1SS270
D5003	23383211	DI 1SS270
D5004	23383211	DI 1SS270
D501	23383211	DI 1SS270

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
D502	23383211	DI 1SS270	D958	23394911	DI AM01Z
D503	23383211	DI 1SS270	D980	2338944	DI FML-G12S(F)
D504	23383211	DI 1SS270	ZD01	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
D505	23383211	DI 1SS270	ZD02	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
D506	23383211	DI 1SS270	ZD101	2339022	DIODE ZENER HZS6B2L
D507	23383211	DI 1SS270	ZD1101	2331801	ZD HZ6(A)1 SI
D508	23383211	DI 1SS270	ZD1101	2339837	ZD HZS-5C1
D550	23383211	DI 1SS270	ZD1102	2331801	ZD HZ6(A)1 SI
D560	23383211	DI 1SS270	ZD1102	2339837	ZD HZS-5C1
D601	23383211	DI 1SS270	ZD1103	2339837	ZD HZS-5C1
D6012	23383211	DI 1SS270	ZD1104	2335991	ZD HZT-33
D602	23373411	DI 1SS270A	ZD1105	2339837	ZD HZS-5C1
D603	23394911	DI AM01Z	ZD1106	2339837	ZD HZS-5C1
D605	23383211	DI 1SS270	ZD1107	2339837	ZD HZS-5C1
D606	23383211	DI 1SS270	ZD1108	2339837	ZD HZS-5C1
D607	23383211	DI 1SS270	ZD1109	2339837	ZD HZS-5C1
D651	23383211	DI 1SS270	ZD1110	2339837	ZD HZS-5C1
D652	23394911	DI AM01Z	ZD1111	2339837	ZD HZS-5C1
D655	23383211	DI 1SS270	ZD1112	2339837	ZD HZS-5C1
D7001	23383211	DI 1SS270	ZD1113	2339829	DIODE-ZENER HZS4C3
D7002	23383211	DI 1SS270	ZD1114	2334021	ZD RD2.0EB
D7003	23383211	DI 1SS270	ZD1115	2331801	ZD HZ6(A)1 SI
D701	23383211	DI 1SS270	ZD3009	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
D7011	23383211	DI 1SS270	ZD301	2331849	ZD HZ-12(C3)
D703	2344071	DI ERC20M-04	ZD3010	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
D704	2338902	DI DFM1SA4	ZD3011	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
D705	23394811	DI AS01Z	ZD3015	2339848	ZD HZS-6-C2
D7050	23383211	DI 1SS270	ZD3016	2339848	ZD HZS-6-C2
D7051	23383211	DI 1SS270	ZD3017	2339848	ZD HZS-6-C2
D7052	23383211	DI 1SS270	ZD302	2331849	ZD HZ-12(C3)
D7053	23383211	DI 1SS270	ZD303	2331849	ZD HZ-12(C3)
D707	2338902	DI DFM1SA4	ZD3201	2339848	ZD HZS-6-C2
D708	23383211	DI 1SS270	ZD3202	2339825	ZD HZS4B2
D709	23383211	DI 1SS270	ZD3901	2339889	ZD HZS12C3
D711	2338902	DI DFM1SA4	ZD3902	2339889	ZD HZS12C3
D712	23394811	DI AS01Z	ZD3903	2339889	ZD HZS12C3
D713	23383211	DI 1SS270	ZD40	2339843	DIODE-ZENER HZS6A3
D716	2338902	DI DFM1SA4	ZD4501	2339877	ZD HZS11C1
D7202	2343981	DI ERD07-15	ZD4502	2339884M	DIODE ZENER HZS12B1
D855	23383211	DI 1SS270	ZD4506	2339252	ZD HZS36-2L
D891	2330351	DI 1S2076 SI	ZD4508	2339252	ZD HZS36-2L
D901	2338314	DI RBV-406M LF-A	ZD4510	2339252	ZD HZS36-2L
D902	23394811	DI AS01Z	ZD4511	2339232	ZD HZS30-2L
D903	23394811	DI AS01Z	ZD4512	2339232	ZD HZS30-2L
D904	23394811	DI AS01Z	ZD4513	2339232	ZD HZS30-2L
D906	23394811	DI AS01Z	ZD4514	2339232	ZD HZS30-2L
D907	23394811	DI AS01Z	ZD4600	2339865	ZD HZS9B2
D912	2334581	DI ES1A SI	ZD4801	2339887M	ZD HZS12C1TA
D915	23385311	DI EG01C	ZD4802	2339887M	ZD HZS12C1TA
D950	23389311	DI FMG-G26S	ZD4803	2339887M	ZD HZS12C1TA
D952	2338944	DI FML-G12S(F)	ZD4804	2339887M	ZD HZS12C1TA
D953	2338944	DI FML-G12S(F)	ZD4805	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
D954	2336501	DI 1N4148	ZD4806	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
D955	23394811	DI AS01Z	ZD4807	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
D957	23394811	DI AS01Z	ZD4808	2331154	ZD HZ12 (A1-3/B1-3/C1-3)

PRODUCT SAFETY NOTE: Components marked with a have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
ZD5001	2339861M	DIODE ZENER HZS9A1	CP01	2150335	LC FILTER
ZD5002	2331849	ZD HZ-12(C3)	CP02	2150335	LC FILTER
ZD5003	2331849	ZD HZ-12(C3)	CP03	2150336	LC FILTER
ZD5004	2331849	ZD HZ-12(C3)	CP04	2150335	LC FILTER
ZD601	2339861M	DIODE ZENER HZS9A1	CP05	2150335	LC FILTER
ZD602	2339825	ZD HZS4B2	CP050	2150201	TRAP COIL
ZD6201	2339868M	ZD HZS9C2TA	CP051	2114327	TRAP COIL
ZD7001	2339825	ZD HZS4B2	CP06	2150335	LC FILTER
ZD701	2339825	ZD HZS4B2	CP07	2150335	LC FILTER
⚠ZD703	2339212M	ZD HZS24-2L TA	CP08	2150335	LC FILTER
ZD704	2339848	ZD HZS-6-C2	CP09	2150335	LC FILTER
ZD708	2339801	ZD HZS2B1	CP10	2150335	LC FILTER
ZD709	2331849	ZD HZ-12(C3)	CP11	2150333	LC FILTER
ZD791	2339868M	ZD HZS9C2TA	CP1101	2791754	DSS306-55B101M
ZD795	2339848	ZD HZS-6-C2	CP1102	2791754	DSS306-55B101M
ZD796	2339825	ZD HZS4B2	CP1103	2791754	DSS306-55B101M
ZD901	2334022	ZD RD2.0EB	CP1104	2791754	DSS306-55B101M
ZD902	2334243	ZD RD16E(B2)	CP1105	2791754	DSS306-55B101M
ZD903	2334052	ZD RD2.7EB1 SI	CP1106	2791754	DSS306-55B101M
ZD904	2331844	ZD HZ-12 (B1)	CP1107	2791754	DSS306-55B101M
ZD905	2339151	ZD HZS12C1L	CP1108	2791754	DSS306-55B101M
ZD906	2339052	ZD HZS7B2L	CP1109	2791754	DSS306-55B101M
ZD930	2331154	ZD HZ12 (A1-3/B1-3/C1-3)	CP1110	2791754	DSS306-55B101M
ZD951	2331846	DIODE-ZENER HZ12(B3)	CP1201	2574741	IC GP1U721Q (IR RECEIVER)
ZD952	2332229M	ZD HZ7B1LTA	CP201	2300345	SAW FILTER HW3025
ZD953	2331799	ZD HZ5(C)3 SI	CP202	2305861	SAW FILTER HW2226
⚠TH901	2340542	TH 160Y	CP280	2142335	CERAMIC TRAP 5.74MHZ
TP001	2661756	1P PLUG PIN WITH BASE	CP281	2143473	TRAP COIL
T5001	2143563	BEL FILTER TRANSFORMER	CP282	2142243	CERAMIC TRAP
T5002	2145721	IDENT COIL	CP283	2142241	CERAMIC FILTER 4.5MHZ
T501	2143341	7PL COIL	CP3201	2163971	CERAMIC FILTER
T701	2260291	HOLIZONTAL DRIVE TRANSFORMER	CP380	2143893	LC FILTER
⚠T702	2436621	FLY BACK TRANSFORMER	CP382	2142331	CERAMIC TRAP 4.5MHZ
⚠T703	2272762	SPC TRANSFORMER	MF401	2142601	CERAMIC FILTER 4.5MHZ
⚠T901	2214555	POWER TRANSFORMER	MF442	2142603	CERAMIC FILTER 6.0MB
FB201	2123461	FERRITE BEADS CORE	MF471	2142603	CERAMIC FILTER 6.0MB
FB301	2123461	FERRITE BEADS CORE	MF472	2142602	CERAMIC FILTER
FB302	2123461	FERRITE BEADS CORE	MF473	2142604	CERAMIC FILTER 6.5MB
FB303	2123461	FERRITE BEADS CORE	DL381	2793281	DELAY LINE
FB4501	2123461	FERRITE BEADS CORE	DL5001	2165801	DELAY LNE SDL4242
FB4502	2123461	FERRITE BEADS CORE	DL5002	2165811	B.P.FILTER SBP4370
FB4503	2123461	FERRITE BEADS CORE	DL5003	2794251	DELAY LINE
FB4504	2123461	FERRITE BEADS CORE	DL5004	2150361	LC FILTER SDL4620
FB901	2123464	FERRITE BEADS CORE	DL501	2791154	DELAY LINE
FB901A	2123461	FERRITE BEADS CORE	L01	2122956	LA AXIAL COIL 100 MICRO H +-10%
FB901B	2123461	FERRITE BEADS CORE	L03	2122956	LA AXIAL COIL 100 MICRO H +-10%
FB901C	2123461	FERRITE BEADS CORE	L1101	2122929	LAL AXIAL COIL
FB933	2123461	FERRITE BEADS CORE	L1102	2122947	LA AXIAL COIL 22 MICRO H +-10%
FB950	2123462	FERRITE BEADS CORE	L1103	2123781	FILTER COIL
FB952	2123462	FERRITE BEADS CORE	L1104	2122253	LA AXIAL COIL 100 MICRO H
FB953	2123462	FERRITE BEADS CORE	L1105	2122956	LA AXIAL COIL 100 MICRO H +-10%
FB954	2123462	FERRITE BEADS CORE	L1308	2122956	LA AXIAL COIL 100 MICRO H +-10%
FB956	2123462	FERRITE BEADS CORE	L201	2143601	FILTER COIL
⚠F901	2720404	FUSE T4.0A	L202	2143812	HIGH FREQUENCY COIL
⚠F950	2720173	FUSE 2A	L206	2120489	FILTER COIL 100 MICRO H +-10%

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	DESCRIPTION
L207	2122253	LA AXIAL COIL 100 MICRO H
L208	2122253	LA AXIAL COIL 100 MICRO H
L251	2122921	LA AXIAL COIL
L252	2142952	TRAP COIL
L253	2122925	LAL AXIAL COIL
L254	2142952	TRAP COIL
L281	2123751	RADIAL COIL
L282	2123750R	RADIAL COIL
L283	2123749	RADIAL COIL
L284	2122956	LA AXIAL COIL 100 MICRO H +-10%
L3001	2120482	FILTER COIL 100 MICRO H +-10%
L3002	2120489	FILTER COIL 100 MICRO H +-10%
L3003	2220584	CHOKE COIL TSL0707330K
L3004	2122964	LAL AXIAL COIL
L3005	2122964	LAL AXIAL COIL
L3006	2122964	LAL AXIAL COIL
L301	2122253	LA AXIAL COIL 100 MICRO H
L3010	2122956	LA AXIAL COIL 100 MICRO H +-10%
L302	2122956	LA AXIAL COIL 100 MICRO H +-10%
L3201	2122956	LA AXIAL COIL 100 MICRO H +-10%
L3202	2122956	LA AXIAL COIL 100 MICRO H +-10%
L3331	2122253	LA AXIAL COIL 100 MICRO H
L348	2122252	LA AXIAL COIL 82 MICRO H
L3502	2122956	LA AXIAL COIL 100 MICRO H +-10%
L3503	2122956	LA AXIAL COIL 100 MICRO H +-10%
L3504	2122956	LA AXIAL COIL 100 MICRO H +-10%
L3901	2122253	LA AXIAL COIL 100 MICRO H
L3902	2122253	LA AXIAL COIL 100 MICRO H
L401	2145992	HIGH FREQUENCY COIL
L402	2145991	HIGH FREQUENCY COIL
L403	2123757R	RADIAL COIL 33UH
L481	2123763	RADIAL COIL 100MH
L5001	2122956	LA AXIAL COIL 100 MICRO H +-10%
L5001	2141148	1H DL COIL
L5002	2122939	LA AXIAL COIL 5.6 MICRO H
L5002	2122956	LA AXIAL COIL 100 MICRO H +-10%
L501	2122941	LA AXIAL COIL 6.8 MICRO H +-10%
L5050	2122242	LA AXIAL COIL 15 MICRO H
L507	2143621	PHASE COIL
L508	2123291M	LA AXIAL COIL 10 MICRO H +-5%
L510	2122949	LA AXIAL COIL 33 MICRO H +-10%
L7001	2122956	LA AXIAL COIL 100 MICRO H +-10%
L703	2220513	COIL 0.01H
L704	2165404	COIL
L705	2123781	FILTER COIL
L705A	2123781	FILTER COIL
L706	2220583	COIL
L707	2220583	COIL
L708	2122095	FILTER COIL 27 MICRO H
L709	2120486	FILTER COIL 4700 MICRO H +-5%
L712	2120482	FILTER COIL 100 MICRO H +-10%
L713	2123469M	FERRITE BEADS CORE READ 2.3
L714	2771892	FERRITE BEADS CORE 004
L715	2771892	FERRITE BEADS CORE 004
L771	2120486	FILTER COIL 4700 MICRO H +-5%
L902	2123504	LINE FILTER
⚠L905	2166213	DEGAUSSING COIL
L906	2123781	FILTER COIL
L907	2123781	FILTER COIL
L927	2122095	FILTER COIL 27 MICRO H
SG851	2340039	SPARK GAP
SG852	2340039	SPARK GAP
⚠SP401	2415061	SPEAKER (6X13)
⚠SP402	2415061	SPEAKER (6X13)
⚠SP403	2414606	SPEAKER (6X12)
⚠SP404	2415091	SPEAKE 6X4
⚠SP405	2415091	SPEAKE 6X4
S1101	2633171	5 KEY TACT SWITCH 5P
S4001	2622301	SLIDE SWITCH
⚠S901	2632509	PUSH SWITCH
⚠V1	2471101	COLOR PICTURE TUBE A68KRT370X
	3177367	GLIP ASS'Y R
	3177368	GLIP ASS'Y L
	3821683	DOOR ASS'Y
BC1	2663132	3P PLUG PIN WITH BASE
CUT	2663822	3P SUB MINI PLUG PIN
CUT2	2663821	2P PLUG PIN
M	2665272	4P PLUG PIN WITH BASE
R	2661942	CONNECTOR
SGND	2661756	1P PLUG PIN WITH BASE
WOF	2663132	3P PLUG PIN WITH BASE
YC	2902263	4P SUB MINI PLUG PIN
	3164391	BACK COVER ASS'Y
	4520881	M3X8 SCREW WITH WASHER
	4236051	HEAT SINK
	4519506	3X8 B TIGHT TAPPING SCREW
	4520883	M3X12 SCREW WITH WASHER
	4520883	M3X12 SCREW WITH WASHER
	4520883	M3X12 SCREW WITH WASHER
	8821114	NUT 3
	3761812	CORD HOLDER
	4518771	3X10 TAPPING SCREW WITH SPRING WASHER
	4518772	3X12 TNE
	3746071	1EC CORD HOLDER
	4159423	M3X12 SCREW W/WASHER
	3744171	LEAD CRAMP
	3105923	FRAME ASS'Y
	3272608	POWER BUTTON
	3332453	SPRING FOR KNOB
	3815301	POWER KNOB SUPPORT
	3209871	DECORATION PLATE (B)
	3875771	LATCH
	4521381	4X16 TAPPING SCREW
	4517512	FLANGE SCREW
	2889324	PWB ASS'Y CPT
	4521381	4X16 TAPPING SCREW
	4517512	FLANGE SCREW
	3613225	PORYETHLENE COVER
	4518376	SCREW

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
	4520232	4X16 DT SCREW			
	4137975	4X16 ZA R SCREW			
	4519512	TAPPING SCREW 4X16 MM			
	3736361	4 PLASTIC SCREW SEAT			
	3831141	TERMINAL HOLDER ASS'Y			
	3727972	HOLDER-AC LINE CORD			
	4159421	3X8 TAPPING SCREW			
	4519511	4X12 TAPPING SCREW			
	4519512	TAPPING SCREW 4X16 MM			
	4519512	TAPPING SCREW 4X16 MM			
	4519503	3X12 TAPPING SCREW			
	4159411	3X8 KNURL TAPPING SCREW			
	8813124	WASHER			
	8815124	WASHER,LOCK 3MM			
	4159411	3X8 KNURL TAPPING SCREW			
	4159421	3X8 TAPPING SCREW			
E	2953344	CPT SOCKET			
ESF	2956782	FOCUS WIRE			
E004	2982291	ANTENNA ADAPTOR			
E008	2905241	ANTENNA ADAPTOR			
E1	2776242	CF MAGNET			
E4001	2672902	4P PUSH TERMINAL			
E851	2661756	1P PLUG PIN WITH BASE			
E902	3333923	EARTH SPRING			
E903	2786227	CPT EARTH WIRE			
⚠E903	2972342	POWER CORD			
E911	2721351	FUSE HOLDER			
E944	2661753	PIN PLUG WITH BASE			
E946	2663132	3P PLUG PIN WITH BASE			
E947	2663132	3P PLUG PIN WITH BASE			
E951	2661753	PIN PLUG WITH BASE			
JA01	2673822	PIN JACK			
JA3001	2673841	6P PIN JACK WITH 2S TERMINAL			
JA3002	2673844	US PIN JACK			
JA401	2672042U	MINI HEAD PHONE JACK			
N	4520881	M3X8 SCREW WITH WASHER			
N	4615644	WEDGE			
N002	4919801	OPERATION GUIDE			
N902	3763752	SK BINDER			
P1FH	2902263	4P SUB MINI PLUG PIN			
P1P1	2661756	1P PLUG PIN WITH BASE			
U001	2428332	TUNER ET-575S			
U002	2575562	NICAM UNIT ASS'Y			
U1101	2573851	REMOTE CONTROL TRANSMITTER CLE-890			
U701	2444761	DEFLECTION YOKE C110-29SHS			
W916	3763752	SK BINDER			
⚠X01	2168611	CRYSTAL 27.75MHZ			
X02	2165081	CERAMIC OSCILLATER			
X1101	2792071	CERAMIC OSCILLATOR			
X481	2166041	CERAMIC FILTER 512KHZ			
X501	2787572	CRYSTAL			
X502	27885911	CRYSTAL			
X5021	2168542	CRYSTAL			
X701	2786683	CERAMIC OSCILLATOR			